مكتبة الأهرام

Austria	Sch22	Indonesia	Rp3100	Portugal	Esc100
Bahrain	Din0.650	Israel	IS3.50	S.Arabia	Rls7.00
Belgium	BFr48	Italy	L1500	Singapore	S$4.10
Canada	C$1.00	Japan	Y600	Spain	Pta125
Cyprus	C£0.75	Jordan	Fils 500	Sri Lanka	Rup30
Denmark	DKr9.00	Kuwait	Fils 500	Sweden	SKr9.00
Egypt	E£2.25	Lebanon	L£125.00	Switz	SFr2.20
Finland	Fmk7.00	Lux	LFr48	Taiwan	NT$65
France	FFr6.50	Malaysia	Rin4.25	Thailand	Bht50
Germany	DM2.20	Mexico	Pes300	Tunisia	Din0.800
Greece	Dr100	Morocco	Dh6.00	Turkey	L500
Hong Kong	HK$12	Neth	Fl3.00	UAE	Dh6.50
India	Rup15	Norway	Nkr10.00	USA	$1.00

FINANCIAL TIMES

EUROPE'S BUSINESS NEWSPAPER

No. 30,497 Thursday March 24 1988 D 8523 A

French poll: The trouble with the right, Page 14

World News

Nicaraguan talks close to deal on ceasefire

Talks between the Nicaraguan Government and US-backed Contra rebels were close to a breakthrough to agreeing to a ceasefire in the six-year-old war. Both sides were optimistic as they began a third day of negotiations. Page 4

Meanwhile the official radio in Managua said two Sandinista soldiers and a Contra fighter were killed when Nicaraguan rebels ambushed a government truck to northern Nicaragua, apparently violating a three-day-old truce called by Managua Government leaders and Contra chiefs.

Honduras pull-out

Pentagon officials said the US planned to begin removing 3,200 troops from Honduras as early as next Monday after they completed joint exercises with Honduran forces.

Panama strike 'illegal'

A general strike in Panama entered its third day with the Government declaring it illegal and opposition leaders urging more people to take part.

Europe 'trapped'

Western Europe was caught in a low-growth trap and its failure to offset weaker growth in the US could push the world economy into recession, a UN economic survey reported. Page 2

EC ship levy threat

The European Commission threatened to demand punitive port levies on unfairly under-priced Japanese and South Korean vessels visiting the EC unless the two countries agreed with the Community on fair competition in shipbuilding. Page 5

Critical Ethiopia battle

Fighting between Eritrean guerrillas and Ethiopian Government troops continued in what was seen in one of the most critical battles of the 26-year conflict. Page 3

Fresh Gulf attack

Iranian gunboats set a Cypriot cargo ship ablaze in the southern Gulf in Iran's sixth attack since Saturday when Iraq attacked two of its tankers at Kharg Island. Use of chemicals condemned, Page 3

Taiwan halts N-plant

Taiwan yielded to US pressure and stopped work on a secret plant that could have processed fuel to extract plutonium, a key component of nuclear weapons, US newspapers said. Page 3

Saudis curb pilgrims

Saudi Arabia said it would temporarily limit the size of the annual pilgrimage to Moslem holy sites in the kingdom. Last year's Haj pilgrimage to Mecca and Medina wes marred by bloody clashes between Sandi security forces and Iranian pilgrims in which at least 400 people were killed.

Philippines bomb

Nineteen people were wounded when a bomb exploded at a supermarket in the southern Philippines city of Davao. Moslem rebels were believed responsible.

Sri Lanka shooting

Indian peace-keeping troops and Sri Lankan police opened fire at random, injuring six civilians, after a grenade was thrown at a police station in a town in eastern Sri Lanka.

Locusts plague Africa

Huge swarms of locusts swept North and West Africa in the worst plagus for 30 years and threatened to spread south of the Sahara.

Paris logs trees

City officials in Paris said they were using computers to keep tabs on the capital's 446,000 trees and unveiled a 60-year tree-replacement programme.

Business Summary

Chemical Bank to sell UK loans unit

CHEMICAL BANK, US banking group, is to sell its UK mortgage lending unit because it is tying up too much of its scarce capital resources.

The subsidiary, which began mortgage lending in the UK in 1981 and which will be sold as a going concern, is Chemical's only retail banking operation outside the US. Page 17

US HOUSE BANKING Committee published proposed legislation which would give banks some access to securities business but far more restricted powers than those suggested in rival legislation tabled by the Senate Banking Committee. Page 16

SEAGRAM, Canadian wine and spirits company which recently acquired Martell of France and Tropicana of the US, increased net income by 23 per cent last year. Page 17

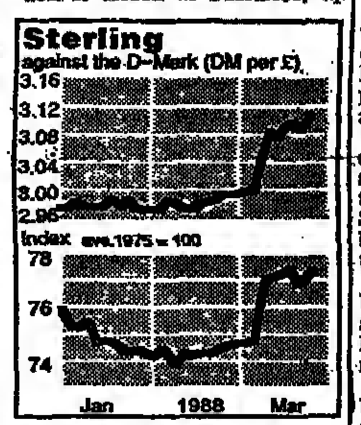
WESTERN EUROPE is caught to a low-growth trap and its failure to offset the weaker growth to the US could push ths world economy into recession, according to the UN Economic Commission for Europe. Page 2

MORGAN GRENFELL, UK merchant bank, signed a £193m ($354m) export credit package for the Soviet Union to finance the £246m contract won by Simon-Carves to establish a plant automation equipment factory at Yerevan in Armenia. Page 4

WALL STREET: The Dow Jones industrial average closed up 1.49 at 2,067.64. Page 40

LONDON: Exporting stocks were hit by renewed upward pressures on sterling and the FT-SE 100 index lost 3.2 to 1,832.2. Page 36

STERLING: In New York the pound closed at $1.8370. In London it closed at DM3.1050, up



from Tuesday's close of DM3.0975. It had traded as high as DM3.11, but rumours of intervention by the Bank of England slowed its advance. Against other currencies, the pound closed at $1.8355 ($1.8295); Y232.75 (Y232.50); SFr2.5650 (SFr2.5650); FFr10.5450 (FFr10.5250). The Bank's trade-weighted sterling index closed 0.2 points higher at 77.3. Page 29

TOKYO: Afternoon profit-taking took share prices off the day's peaks, but the market closed higher on continned strong demand, especially for large capitals. The Nikkei average ended up 52.48 at 25,895.23. Page 40

DOLLAR closed in New York at DM1.6915; Y126.85; SFr1.3985; FFr5.7460. It closed in London at DM1.6910 (DM1.6935); Y126.80 (Y127.10); SFr1.3975 (SFr1.4015); FFr5.7450 (FFr5.7525). Page 29

THE INFORMAL Paris Club of Western creditor governments has agreed to reschedule part of Togo's CFA Fr330b ($1.2bn) foreign debt to stretch repayments over 16 years.

HEWLETT-PACKARD, US electronics group, and Microsoft, software company, hit back at the copyright infringement suit filed against them last week by Apple Computer. Page 17

SCHNEIDER, privately owned French industrial group, has msde an ontright bid worth FFr8.8bn ($1.5bn) for Télémécanique, industrial automation company, topping Framatome's offer by FFr900 a share. Page 18

Moscow signals tougher line over Armenian protests

BY LESLIE COLITT IN MOSCOW AND BRUCE CLARK IN LONDON

THE SOVIET LEADERSHIP yesterday brushed aside boundary changes demanded by Armenian nationalists and signalled a tougher line towards campaigners in the republic, where protests are again growing in strength and militancy.

The praesidium of the Supreme Soviet, after an emergency meeting addressed by Mr Mikhail Gorbachev, the Soviet leader, issued a statement that called for law and order in Armenia and neighbouring Azerbaijan, and ignored nationalist demands for reunification with Armenia of the disputed Azerbaijani territory of Nagorno-Karabakh.

The statement promised better social and economic conditions in the disputed area, but it fell far short of meeting the demands of activists in Yerevan, the Armenian capital, where a group of them had earlier pledged to stage "explosive" protests this Saturday.

The praesidinm called on the two republics to defend the interests of citizens of all nationalities. People who destabilize the situation and erode the friendship of the "fraternal Soviet peoples" would be brought to "strict justice", it said, suggesting that political activists, as well as those engaged to violence, would face a crackdown.

A prominent Armenian activist, Mr Paruyr Kharikyan, was arrested in Moscow on Tuesday and sent back to Yerevan. Many telephone lines between Moscow and Yerevan appeared to be cut, and Westerners telephoning Yerevan said their contacts had become nervous about speaking.

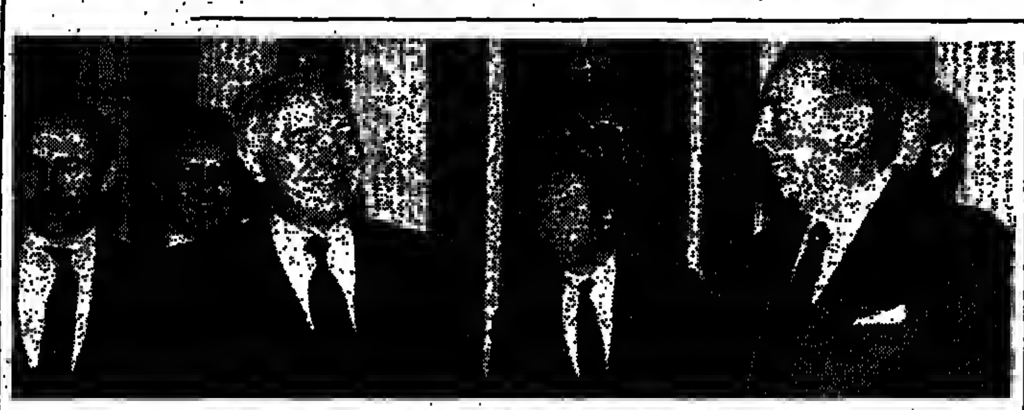
An apparently orchestrated series of appeals for observance of the Soviet constitution had been sent to the praesidium by all the Soviet republics except Armenia and Azerbaijan.

Hundreds of thousands of people demonstrated in Yerevan last month to back demands for the return to Armenia of Nagorno-Karabakh, most of whose inhabitants are ethnic Armenians. At least 32 Armenians were killed in the Azerbaijani city of Sumgait, and Armenian campaigners have alleged that the death toll was far higher.

The praesidium criticized the organizers of demonstrations in Yerevan this week, referring to "self-styled groups" who advocated the "recarving" of borders which could lead to "unpredictable consequences".

One of the statement's targets appeared to be Mr Igor Muradyan, an Armenian activist who since the weekend has been addressing a series of increasingly angry meetings in Yerevan.

The atmosphere there has worsened since Monday's publication in Pravda of an article sharply criticizing the Armenian nationalists. Western Armenian activists said 15,000 people gathered outside a press building in Yerevan to protest against the newspaper's comments, which they called a "provocation" against Mr Gorbachev. Pravda's Armenia correspondent yesterday dissociated himself from the article.



George Shultz (right) greets his Soviet counterpart Eduard Shevardnadze at the US State Department yesterday

Reagan sets date for Moscow arms summit

BY LIONEL BARBER IN WASHINGTON

PRESIDENT Ronald Reagan is to visit Moscow for his fourth summit meeting with Mr Mikhail Gorbachev, the Soviet leader, between May 29 and June 2.

The planned centrepiece of the visit is the signing of a treaty to cnt the two snperpowers' long-range nuclear arsenals by 50 per cent, but it is not clear if an agreement will be ready in time.

Mr Reagan announced a firm date for the Moscow meeting after his first round of talks with the Mr Eduard Shevardnadze, the Soviet Foreign Minister, who is holding three days of pre-summit talks in Washington.

Asked if the US and the Soviet Union might be able to conclude a strategic arms accord by May, Mr Reagan told reporters: "I have no way to answer that now."

Mr Reagan, 77, will be the first US president to set foot on Soviet soil since President Gerald Ford, also a Republican, went to Vladivostok in 1974 to sign a tentative long-range missile pact.

Mr Shevardnadze said: "Now the dates have been set, we will work on making the content interesting."

The Soviet Foreign Minister added that there had been progress on the issue of Afghanistan and the promised withdrawal of Soviet troops, but he did not elaborate.

The agreement on a superpower summit in Moscow follows earlier meetings between Mr Reagan and Mr Gorbachev in Geneva, Reykjavik and Washington, where last December the two leaders signed a treaty eliminating their intermediate nnclear forces (INF), the first substantial arms rednction pact of the nuclear age.

Aside from the more complex question of long-range missiles, both sides are involved in intense talks on Afghanistan. The most difficult issue turns on a US demand that Moscow halt military aid to the Kabul regime in "symmetry" with a US cut-off of aid to the Afghan resistance.

Mr Reagan is under intense bipartisan pressure from the US Senate to keep supplying the rebels with military aid until well after the promised Soviet withdrawal of 115,000 troops starts to take place.

Mr Shevardnadze made clear on Tuesday that the Soviets would prefer an internationally negotiated withdrawal under the auspices of the United Nations sponsored talks in Geneva.

Yesterday's announcement of a Moscow summit came exactly five years after Mr Reagan, a staunchly anti-Communist president, unveiled his Strategic Defence Initiative, (SDI).

Oil prices rise as Opec seeks talks

BY ANDREW GOWERS AND STEVEN BUTLER IN LONDON

OIL PRICES jumped last night when the Organisation of Petroleum Exporting Countries (Opec) surprised the market by moving to convene an urgent meeting of its price committee to consider possible production cuts.

Mr Hisham Nazer, the Saudi Oil Minister, requested an immediate meeting of the price-monitoring committee – comprising himself and the ministers of Nigeria, Venezuela, Indonesia and Algeria – to "stop any confusion" in the market.

His statement, which followed an earlier Nigerian announcement that the committee would meet in early April in Vienna, appeared to reflect a surprising about-face by Saudi Arabia.

Previously, Saudi Arabia had been holding out against either a price committee meeting or production cuts, despite the recent weakness in prices.

The price of North Sea Brent crude, which has been swinging between $14 and $15.50 in recent weeks amid a string of rumours hinting at possible action by Opec to shore up the market, rose on the announcement of the meeting before falling back to close at $15.35, np 58 cents.

Mr Rilwann Lukman of Nigeria, Opec's President, said in Lagos the meeting would review production in the first quarter of 1988 and decide "what action, if any, requires to be taken to further strengthen the market."

However, the committee is powerless to act on its own and would have to call an extraordinary Opec ministerial meeting to act on any recommendations. A regular ministerial session is scheduled for June 8.

Some analysts saw yesterday's moves as a psychological attempt to halt the recent price slide.

"It's a defensive measure, aimed at satisfying market hopes," said Mr Geoff Pyne, oil analyst with UK stockbrokers Phillips and Drew.

There has been pressure for a

Commodities, Page 28
Continued on Page 16

Mitsubishi drops bid for S African steel project

BY ANTHONY ROBINSON IN JOHANNESBURG

JAPAN'S Mitsubishi Corporation has dropped out of tendering for a R600m ($280m) South African steel mill project to what is seen as an attempt to head off growing criticism of Japan's stake in the South African economy.

Iscor, the state-controlled iron and steel company which put out tenders for a hot-rolled strip mill to be built at its Vanderbijlpark works, south-east of Johannesburg, said the Japanese company had cited internal problems of "an organisational and technical nature" for its decision.

But the decision closely follows a call by Keidanren, Japan's largest business organisation, for Japanese companies to restrain voluntarily their business with South Africa.

Keidanren's action follows

Continued on Page 16

UK building society in move to compete with banks

By David Barchard in London

ABBEY National, Britain's second largest building society, yesterday became the first to announce plans to turn itself into a limited company. Building societies are the chief source of house funding in the UK.

The Abbey National is the first to take full advantage of 1986 legislation opening up a much greater range of business activities to building societies and allowing them to raise funds on the money markets.

The move will make Abbey National a full competitor of Britains's four major UK clearing banks.

It will involve a stock market flotation which, it has been estimated by Morgan Grenfell, the merchant bank, could be worth £1.8bn ($3.3bn).

Tbat would give Abbey National a higher capitalisation than either Midland Bank, the second smallest of the clearers, or Lloyds Bank. Its assets total £26.4bn

Sir Campbell Adamson, chairman, indicated yesterday that the building society, would not call itself a bank, althongh it will have to acquire a banking licence and come under Bank of England regulation.

Building societies are currently mntual bodies owned by their members – savers and borrowers with them. They were given the power to change their status to limited companies in the 1986 Building Societies Act, although detailsd regulations to enable this have yet to be published by the UK Treasury and approved by Parliament. These are expected by the summer.

The legislation reflected pressure from societies for more freedom to expand into other areas following the increased competition they were facing from banks on mortgage lending.

Since the Act, societies have diversified toto a wide range of non-traditional activities, including estate agency, unsecured personal lending, cheque current accounts and credit cards.

But as mutual bodies they still face limits on moving into certain bnsiness areas and are unable to go to the equity market for funds.

Abbey National has 98 estate agency offices, and has begun to diversify outside the UK, setting up subsidiaries in Jersey and Gibraltar. It has also announced plans to join both the Visa Organisation and the Joint Credit Card Company enabling it to issue credit cards through either the Visa or the Mastercard/Access networks.

To complete its move into the retail banking market, earlier

New foundations, Page 8; Lex, Page 16
Continued on Page 16

Brierley launches $1.2bn takeover offer for CalMat

BY RODERICK ORAM IN NEW YORK

CALMAT, a California building materials group, has received a $40 a share, $1.2bn takeover offer from Brierley Investments (BIL), the main corporate vehicle of Sir Ron Brierley, the New Zealand entrepreneur.

BIL – making its largest bid yet – appears most interested in CalMat's large but undervalued land holdings in southern California and Arizona.

Industrial Equity (Pacific), a Hong Kong associate of BIL, already owns a 19.2 per cent stake in CalMat and two of its North American executives sit on the CalMat board.

Attempts by IEP to increase its influence on CalMat led to a standstill agreement between them last December, bnt the Brierley camp retained the right to launch a tender offer. In return, CalMat dropped lawsuits alleging that an IEP executive had misappropriated insider information while sitting on CalMat's board.

CalMat said its directors would meet promptly to measure BIL's proposals against its own for improving shareholders' value. It had already "taken significant steps" over the past three years through reinvesting funds from

Sir Ron Brierley: consolidating his businesses

disposals in "higher margin core businesses."

The company, formed in June 1984 by the merger of California Portland Cement and Conrock, produces cement, concrete, aggregates and asphalt and develops land.

Some land holdings, originally bought as a source of raw materials, have become ripe for development. Analysts estimate these could be worth three or four times the $69m balance sheet value.

A downturn in southern Californian construction is dampening demand for cement and aggregates, but demand for asphalt remains strong. It said in January that it expected flat revenues and profits this year. For 1987 CalMat reported net profits of $78.1m or $2.53 a share, against $44.1m or $1.44 a year earlier on sales of $658.9m against $619m.

Gordon Cramb adds: By the end of last year BIL, New Zealand's second largest company, had nearly NZ$1.2bn (US$796m) in undrawn credit facilities, and since then has raised funds by selling assets. However, the CalMat cash bid is conditional

IEP bought into CalMat, Sir Ron's biggest US investment, at about $26.30 a share. His commitment to the building materials industry looked less firm earlier this month, however, when BIL agreed to sell Winstone, a leading New Zealand supplier, for NZ$444m.

Since the October stock market crash wiped nearly NZ$3bn off the value of his companies' worldwide holdings, Sir Ron has been seeking to consolidate the businesses.

Lex, Page 16

CONTENTS

THE MAN WHO HAS STOLEN THE BONN LIMELIGHT

Oskar Lafontaine, one of the two deputy SPD chairmen, is in West German headlines, Page 2

Kohl's resignation hint pulls Bonn coalition partners into line

BY DAVID MARSH IN BONN

A FURTHER picture of disarray in the Bonn coalition was served up yesterday when government officials confirmed that Chancellor Helmut Kohl indirectly threatened to resign on Tuesday during a heated discussion with coalition partners on the Government's tax cut plans.

Officials close to Mr Kohl said the Chancellor, angered by blocking attempts by Mr Franz Josef Strauss's Bavarian conservative party, banged his fist on the table and declared that he would not be turned into a "dancing bear".

They said the Chancellor held out the threat of dissolving the coalition by saying that he would call on President Richard von Weizsäcker unless the Government agreed tax proposals put forward by Mr Gerhard Stoltenberg, the Finance Minister.

The disagreement centred on relatively minor adjustments requested by Mr Strauss's Christian Social Union (CSU), including changes in investment credit procedures and in interest charges on back-tax payments by farmers.

A quarrel also erupted between the CSU officials at the meeting and the liberal Free Democratic Party (FDP) over the Government's plans to exempt private pilots in amateur flying clubs from fuel tax. Mr Strauss, who backs the exemption, is a keen aviator.

"With me, this can go no further," officials yesterday quoted Mr Kohl as saying. He told the coalition meeting: "I will go straight over to Richard (von Weizsäcker)" unless agreement was reached on the outstanding points. This was a reference to the formal residence of the West German president, the Villa Hammerschmitt, which stands close to the Chancellery headquarters on the banks of the Rhine.

Government officials yesterday were trying to play down the seriousness of Mr Kohl's threat, and pointed out that the strong-arm tactics had enabled him to get his way. The session preceded a full meeting of the cabinet which agreed – subject to some details which still need clearing up – the main thrust of DM20bn(£6.5bn) of net tax cuts to come into effect by 1990.

However, they said that the meeting – reports on which emerged in some West German newspapers yesterday – had been the most heated coalition session since the centre-right government came to power five and a half years ago.

Tension between the coalition parties (Mr Kohl's Christian Democratic Union (CDU), the CSU and the FDP) has increased further as a result of the Baden-Württemberg state election on Sunday. The three parties have all blamed each other for the Government's indifferent electoral fortunes.

Mr Lothar Späth, CDU Prime Minister of the state and a possible rival to Mr Kohl, maintained an absolute majority of seats, but both the Christian Democrats and the Free Democrats suffered a fall in their share of the vote.

The strains are a harbinger of more bickering to come as the tax package wends its tortuous way through both houses of Parliament this summer. One reason for Mr Kohl's anger on Tuesday, according to officials, was the realisation that coalition in-fighting could hold up important parts of controversial government programmes planned to reform the tax, health and pensions system, modify abortion laws and deregulate the post and telecommunications service.

Legislation on all these issues is planned to be in place by the end of 1989, leaving 1990 free for the campaign leading to the next general election at the end of that year.

Gorbachev points to big changes in farming

By Leslie Colitt in Moscow

THE prospect of a wide-ranging reform of Soviet agriculture, turning some 27,000 bureaucratic collective farms into efficient co-operatives, was held out yesterday by Mr Mikhail Gorbachev.

Speaking at a rare congress of the nation's collective farmers yesterday, Mr Gorbachev said draft legislation on co-operatives would create a co-operative movement in farming in line with his economic reform programme.

He was the first Soviet leader since Lenin to point to the importance of "individual small holdings" and said conditions should be provided to help people manage them. Until now, individual collective farmers have intensively tilled household plots which produce a large share of the Soviet Union's eggs, fruit and other produce.

The collective farms created after Stalin drove the kulaks (wealthy peasants) from their medium-sized farms in the 1930s had degenerated into "junior partners" of the state sector, Mr Gorbachev said.

The draft law, to be discussed at the three-day conference along with a collective farm statute, is expected to facilitate ties between crop-producing and animal breeding farms, as well as between farms and food processors.

Widespread use is to be made of "team contracts" under which the collective farm will rent land to workers, often families, who will sell an agreed amount back to the farms and retain income according to results. They would sell the remainder either on the free market or to the collective farm at a premium.

Similar systems exist in Eastern Europe but East European officials in Moscow said some Soviet farmers taking part in an experiment on team contracts were fined for earning excess profits.

The Communist party newspaper, Pravda, reported extensively yesterday on a collective farm in Siberia, which operated experimentally on the new co-operative basis. A family of nine persons was said to have formed a cattle-breeding co-operative, using buildings and animals "bought oo credit" from the collective farm for Roubles 275,000 (£250,000).

Bossano set to win in Gibraltar

By Tom Burns in Madrid

MR JOSE BOSSANO, the leader of the Gibraltar Socialist and Labour Party (GSLP), is the clear pre-poll favourite to win elections today to Gibraltar's House of Assembly, indicating a determined backlash among the Rock's 17,000 voters against the Anglo-Spanish negotiating process over the future of the British crown colony.

The elections are the first to be held in Gibraltar since a 1984 agreement between Britain and Spain ended all Spanish restrictions on the Rock's frontier and simultaneously opened the negotiations between the two governments.

Mr Bossano has campaigned strongly for the rejection of an agrsement last December between London and Madrid over joint use of Gibraltar's airport and he has promised to boycott the bilateral foreign ministers' meetings that aim to solve the differences between Spain and Britain over the colony'e disputed sovereignty.

Last minute calls on voters by Sir Joshua Hassan, in the forefront of the Rock's politics for the past 30 years until his resignation as chief minister last December, to reject Mr Bossano's confrontational policies appeared to have had little impact oo the electorate.

Opinion polls have given the GSLP more than 60 per cent of the vote and its eight candidates appear certain to win seats in the 15-member assembly. Under Gibraltar's voting system each party presents a list of eight candidates and electors choose eight names from any of the lists.

Sir Joshua's party, the Association for the Advancement of Civil Rights (AACR), has effectively been split by the creation of the Independent Democratic Party (IDP) following his resignation. The IDP reflects voter criticism of Sir Joshua's acceptance of the December airport agreement.

Italian industrial output up 7.3%

By Alan Friedman in Milan

ITALY'S industrial ootput rose by 7.3 per cent in January over the figure for the same month last year, on an unadjusted basis.

The January rise represented a 4.1 per cent improvement on December 1987, according to the governmeot statistical bureau. The last December-January seasonally adjusted increase in output was 5 per cent.

Compared to a year ago the production rise was 19.9 per cent for the tyre and rubber sector, and 17.5 per cent in the vehicles industry. Output fell 5.5 per cent in the clothing industry and 8.5 per cent in the energy sector.

Finnish spying arrest

Finnish police said they were holding two people on suspicion of spying but refused to confirm reports that they were thought to have sold high technology to the Soviet Union, Renter reports from Helsinki. Police said the two would go before a court in the next month.

Leslie Colitt in Moscow reports on worsening consumer goods shortages

Soviet shoppers queue with glasnost

SOVIET CONSUMERS, struggling with increasingly erratic supplies of milk, meat and consumer goods are finding it difficult to take to heart the ambitious economic reforms of the Soviet leadership. Paradoxically, the worsening shortages coincide with the broadening of perestroika, Mr Mikhail Gorbachev's economic reform programme.

East European economic officials in Moscow, however, call the deterioratioo "Brezhnev's revenge" allnding to the late Soviet leader's weakness for costly prestige projects and the rigid, command-style planned economy.

In spite of glasnost, Soviet aothorities do not publicly acknowledge the worsening of tha consumer's lot. Economists writing in the official media speak only of the urgent need to improve food supplies if perestroika is to gain credibility among Soviet citizens.

Soviet consumers, the East Europeans say, are worst off in European Russia. Supplies are better in the more advanced Baltic republics and in more individualistic Central Asia as well as in the priority industrial cities of Siberia.

Moscow, always pampered by Soviet planners, is better off than most of European Russia but even here there is ample evidence of growing shortages.

Thus the arrival of sausages last week in Moscow shops produced enormous queues at Gastronom food shops and butchers.

Within hours the tubs of sausages were sold out and it was back to fatty minced meat.

In addition to the chronically inefficient distribotion system, which can turn even abundance into scarcity, the main culprit is seen in the low retail price of meat – 2 roubles a kilo for beef and pork when available. Twice this amount is paid to meat producers who, however, still have little incentive to boost output.

"Flying" meat marketeers take advantage of the shortages. One man swiftly set up a folding table outside the Gastronom in Kalinin Boulevard last Sunday and swiftly laid out a dozen packets of red meat. Within minutes he had sold them to passers-by for well above the normal price and had vanished before the Militia (police) could spot him. Meanwhile, inside the vast food shop, Muscovites patiently queued for sausages, baked beans and eggs which residents say are no longer available at many outlying food shops.

Soviet planners are working out details of a wholesale trading system which is to be introduced at a future date. First, though, a price reform - scheduled to begin next year - must put an end to the costly subsidising of necessities and allow producers to determine their real costs.

Arrival of sausages produced enormous queues last week at food shops and butchers. Within hours they were sold out and it was back to fatty minced meat.

The supply of essentials deteriorates in Moscow in proportion to the distance from the city centre. At the village of Peredelkino, 21km from Red Square, the Universalny Magazin, a department store illustrates the frustrations faced by Soviet consumers.

The products on display last weekend were similar in quality and style to those of postwar Eastern Europe. Shoppers walked glumly past unwrapped toothbrushes of dubious quality. A pair of poorly made women's boots at 79 roubles – the average monthly wage is 200 roubles – found no takers. Nor did crushed men's suits from Romania which sold for 149 roubles.

The only remotely fashionable item was a pair of corduroy jeans from Eastern Europe at 100 roubles.

Occasional deliveries of western shoes and some other consumer goods as in past years have almost ceased. The Soviet Union must conserve its shrinking hard currency income because of the fall in earnings from sales of oil and gas in the West.

At the same time Eastern Europe is offering its best goods to the west to repay its rising foreign debt and to buy crucial Western machinery and equipment.

Viewed from the perspective of the Soviet consumer then, Mr Gorbachev's recent remark that the Brezhnev era left the Soviet Union 15 years behind the West looks decidedly optimistic.

The leadership'e dilemma is the lack of material incentives to offer the population while calling for better work in return for higher pay. Irregular supplies of basic consumer goods are not likely to convince Soviet workers that the extra effort is worthwhile.

Belgrade told to link with rights groups

A YUGOSLAV writer yesterday called on the communist authorities to co-operate with international human rights bodies, Reuter reports from Belgrade.

Mr Vladimir Prvulovic, author of a book entitled In the Name of the People: Human Rights and Freedom in East-West Relations," said Yugoslavia should end the practice of just criticising rights groups and start communicating with them.

The publication of his remarks in the semi-official daily newspaper Borba came soon after moves to set up an official human rights commission in this non-aligned communist country.

"[Human rights bodies] should not be ignored. We should communicate and polemicise with them and try to counter their incorrect and distorted picture of Yugoslavia," Mr Prvulovic said.

"We certainly won't achieve anything by simply pinning pejorative labels on them," he said.

The Yugoslav Government has often been accused by the London-based human rights group Amnesty International and others of violating the rights of people opposing ruling Communist Party policies.

Yugoslavia is a signatory of most international agreements on human rights.

Soviet journal to publish Orwell's Animal Farm

A SOVIET literary journal has published the first of four instalments of British writer George Orwell's satire on totalitarianism, Animal Farm, editors of the journal said yesterday, Reuter reports from Moscow.

Orwell, who fought in the Spanish Civil War and supported left-wing causes, wrote the novel as a satire on Soviet-style communism under Stalin.

An editor of Rodnik, published in the Baltic republic of Latvia, said that the novel would be published in full in the journal's March to June editions.

Publication of Animal Farm marks a new step forward in the Kremlin'e openness drive,which has seen publication of many formerly banned books.

David Goodhart reports on new economic ideas in the West German opposition

Lafontaine hogs the SPD limelight

FOR THE past few weeks it has been difficult to open a serious newspaper or switch on a current affairs programme in West Germany without having to put up with somebody coming out for or against Mr Oskar Lafontaine.

One of the two deputy chairmen of the opposition Social Democratic Party (SPD), Mr Lafontaine has hogged the limelight with the heretical suggestion - at once opportunistic and politically courageous - that shorter working time will only create jobs if pay is also cut.

The exhaustive public argument that has followed has been dismissed by some as further evidence of the thinness of political debate in the Federal Republic. Mr Lafontaine, who used to be associated with the SPD left and the idea of closer ties with the Green Party, has been labelled by much of the press as a vain bigmooth more interested in the sales of his latest book than in party unity.

But Mr Lafontaine's thoughts on job creation are merely the tip of an iceberg. A somewhat ill-defined corpus of "new economic ideas" has been accumulating in the SPD since soon after the party'e electoral defeat in January 1987.

Since the SPD's Bad Godesberg congress of 1959, when it dropped socialist rhetoric and embraced welfare capitalism, economic thinking in the party has stagnated. The party has not been noted for economic innovation, at least beyond the technicalities of macro-economic management.

Now Mr Lafontaine and others are advocating a new Bad Godesberg. The party has recently been improving its standing under the efficient but uninspiring leadership of Mr Hans-Jochen Vogel. But in order to appeal to more centrist German voters it must seize the initiative in the economic debate and try to prove itself a hard-headed ecooomic manager able to provide practical answers to the problems of unemployment, lack of industrial dynamism and regional imbalances.

The turning point in economic thinking which was supposed to have arrived with the Christian Democratic Government in 1982 has manifestly not ocurred. The sense of drift that this has engendered theoretically provides the SPD with an opportunity. But first, like other left-of-centre parties in Europe, the SPD must associate itself with the idea of wealth creation as well as distribution.

Hence the interest of the new revisionists in venture capital, small companies and reforming the corporate tax system to encourage higher investment. They are also exploring eco-economic ideas such as higher taxes on some forms of energy to help fund aid to firms developing new environmental protection technologies. Helping out with some of this new thinking is a ginger group of leading SPD industrialists.

The idea that unions cannot continue to pass on responsibility for job creation to Government, and must force the "insiders" (the employed) to take some responsibility for the "outsiders," (the unemployed) has touched the rawest nerve. Particularly as Mr Lafontaine's comments were made just as the major public sector union was going into negotiations over a reduced working week and higher pay.

In fact the idea of a fairer distribotion of existing jobs (or working hours), alongside the creation of new ones, is already quite well established in some industries. For example in parts of the motor industry workers can now only take free time as payment for overtime. Also, where it is more expensive for a micro-electronics company to close its plant over a weekend than to keep it running, the logic of flexibility has become irresistible even to union officials.

There is also a respectable body of ideas on pay, job creation and flexibility, derived from the work of two professors from the Free University of Berlin, Mr Peter Grottian and Mr Wolf Dieter Narr. These were first picked op by the Greens and have now influenced Mr Lafontaine.

Applying these ideas among small groups of well-off professionals is easier than selling a pay cut to 20,000 bus drivers. But if unions could be guaranteed a certain number of new jobs in return for a reduction in hours and pay, they could perhaps persuade their members to accept it - especially in a country which remains terrified of the social consequences of unemployment.

Such a guarantee is more easily imagineable in the public sector. Pressure on the state budget in Saarland, where Mr Lafontaine is President, is another inspiration for his thinking. But the productivity effect would be far more difficult to measure in the public sector.

The other difficulty for Mr Lafontaine is that to be properly effective in creating new jobs the pay/hours cut would probably have to be accompanied by some relaxation of the tight and expensive rules on hiring and firing.

The political beauty of the new thinking is that it alienates the unions - who are not especially popular - while tinkering with ideas which can be dressed up to look attractive to both the free market oriented FDP and the Greens, the SPD's two possible coalition partners.

What of Mr Lafontaine's ambitions to lead the SDP into the 1990 general election? He has certainly confirmed his reputation for lack of tact, established immediately after the 1987 defeat when he denounced the political strategy of the then leadership. But although he is not the most popular man in the SPD, he might take encouragement from the fact that towards the end of the party's last long period in the wilderness, it selected the even more charismatic and controversial Willy Brandt as leader.

Public sector workers win shorter week

WELL OVER half of all West German workers will be working less than 40 hours a week from April next year following yesterday's agreement between the main public sector trade unions and central and local government employers, writes David Goodhart in Bonn.

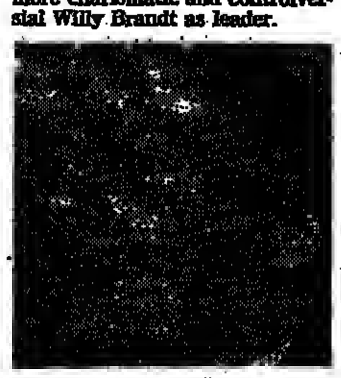
The agreement, which indirectly covers about 4.5m workers, provides for a reduction in working hours to 39 next April and to 38.5 by April 1990. Pay will rise by 5.2 per cent in various stages up to January 1990.

Agreement followed the initial rejection of an arbitrator's recommendation by the employers side. But after the unions conceded that the first stage of the pay rise should not be backdated the deal was done.

This was despite the intervention of Mr Oskar Lafontaine (pictured right), a deputy chairman of the Social Democratic party and Premier of the Saarland, who tried to persuade both sides to agree on a bigger hours cut and a lower pay rise for all but the most lowly paid.

The negotiations directly affect 2.6m blue- and white-collar workers in the post office, the railways and local and central government. Average monthly pay for these workers is currently DM3,400. The deal is also usually extended to the 1.8m beamte, mainly civil servants and teachers, whose conditions of work are directly set by the Government

There are currently 7m workers with a sub-40 hour week, next year that will rise to nearly 12m out of 20m full-time workers.



E Europe gets taste of Big Mac

By Our Foreign Staff

McDONALD'S, the US fast food chain, yesterday launched its first hamburger bar in Eastern Europe in Belgrade, the Yugoslav capital.

Company executives said a McDonald's would open in the next few months in the Hungarian capital of Budapest, more outlets would be built in Belgrade, and a deal would soon be concluded for a restaurant in Moscow.

"We plan to move step by step, one restaurant at a time, one country at a time," said Mr Glen Cook, senior McDonald's executive handling the corporation'e European development plans. McDonald's has some 10,000 restaurants in nearly 50 countries.

Other executives said at a news conference that the hamburger chain's Canadian affiliates were close to signing a deal with the Soviet Union.

"It's an important development," one executive said. "It'e not just hamburgers, but Western culture they are importing. It'e just like Coke and Pepsi years ago."

The Belgrade McDonald'e is a joint venture with Genex, Yugoslavia's biggest general trading concern and regarded by Western businessmen as one of the most reliable partners for joint investment in this non-aligned Communist country.

Genex had a turnover of $4.4bn last year, a 16 per cent growth from 1986. Its exports were worth $2.2bn in 1987 – 15 per cent of Yngoslavia'e total exports.

The deal involves a 50-50 share on the $2.5m equity but the restaurant will be run entirely by the Yugoslavs, said Mr Predrag Dostanic, managing director of McDonald's-Genex.

It envisages initially opening four or five restaurants in the Belgrade area. McDonald's plans to use the local profits to open more.

Officials say the deal will be watched by foreign companies wary of investing in Yugoslavia, which suffers from triple-digit inflation, a $21bn debt, falling productivity, growing insolvency of enterprises and widespread worker unrest.

The country is reforming its "self-management" economic system to give more scope to foreign investment and small-scale private enterprise.

Hungary bill sale

Hungary has launched another capitalist-style financial instrument with the sale of Forints 5bn (£57m) of Treasury bills, Reuter reports from Budapest. The bills, which are repaid in three, six and nine months, pay annual interest rates of 8, 9 and 10 per ceot, respectively.

Recognition for Polish peasants

By Christopher Bobinski in Warsaw

THE Soviet Union has made a significant ideological concession to Poland's private farmers, who own 75 per cent of the land, at the opening of a congress in Moscow of the co-operative farming movement, the first for more than 15 years.

The concession came in a message of greetings from the Soviet Communist Party to Poland's Peasant Party (ZSL) which is holding its own congress in Warsaw this week. This is the first time that the ZSL, which has half a million members, holds 23 per cent of the seats in Parliament and plays a minor role in government, has been recognised in this way.

In the 1980s, in contrast to its previously passive stance, the ZSL has spoken up for the farming lobby both in snpport of higher incomes as well as more investment.

In the past, the Soviet Union has grudgingly put up with Poland's majority private farming sector, as well as the existence of such subordinate political groups as the ZSL, on the understanding that these were transitory phenomena which would be eliminated eventually.

Soviet guests to previous ZSL congresses have played down its political role and treated it more like a professional association. But now, articles have begun to appear in the Soviet press arguing that the establishment of parties subordinated to, but separate from, the Communist party might be desirable. The farm congress in Moscow is expected to discuss easing restrictions on the leasing of land to individual farmers.

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Recessionary clouds gather over Europe, survey warns

BY WILLIAM DULLFORCE IN GENEVA

WESTERN EUROPE is caught in a low-growth trap and its failure to offset the weaker growth in the US could pusb the world economy into recession. This is the principal message of the Economic Survey for 1987-88 published today by the secretariat of the UN Economic Commission for Europe (ECE).

Usually, the annual survey by the ECE, which is the only international body to report on both Western and East European economies, is studied for insights into developments in the East.

The current issue records a slowdown in the growth of the centrally planned economies in 1987 and is bearish about their 1988 prospects but its main focus is on what the ECE secretariat regards as the forces working towards recessioo in Western Europe.

Forecasts poiot to slower growth in virtually every country in the region, it says. Economies, such as those of Britain and Italy, which were relatively buoyant in 1987 will slow sharply, while the others will show no improvement or even deteriorate.

Domestic demand and output growth are faltering and present fiscal policies are unlikely to counter these tendencies in the ECE secretariat's view. It notes the slight expansion allowed for in West Germany this year but points out that a tightening has already been announced for 1989.

Decline in Western Europe's competitiveness towards most of the rest of the world, except Japan, means that there is no prospect of faster growth coming from external demand. A US export offensive, helped by the cheaper dollar, will further undermine European growth prospects.

The ECE economists estimate that capacity output in the main Western European economies is hardly growing at all. A large proportion of total fixed investment is going to replace older capital goods rather than to expansioo. This scenario describes the low-growth trap, into which the ECE contends Western Europe has fallen. Weak short-term prospects mean that capital formation is being discouraged and the trap is tightening.

The answer, the ECE argues, is for the European countries to adopt more expansionary fiscal policies which would favour faster growth rates and offset the necessary tightening in US fiscal policy.

European policy co-ordination to achieve these objectives is now urgently needed, the ECE says and notes approvingly last month's call from the European Commission for "internally generated growth" in the Community.

Fears of renewed inflation are dismissed. It is no longer a major economic or political issue in most of Western Europe, the ECE claims. The costs of preventing any marginal increase in current inflation rates should be set against the large and increasing costs of continued low growth and stagnation.

Economic performance in Eastern Europe and the Soviet Union last year was disappointing, the ECE finds. The growth in net material product (NMP, the standard measure of output is the aggregate net value added in the material sphere) slowed from 4.6 per cent to 3.2 per cent in Eastern Europe and from 4.1 per cent to 2.3 per cent in the Soviet Union.

Targets set in the five-year plans are not being met, and the ECE thinks it unlikely that growth will be much more than 3 per cent in 1988. Prospects are clouded by domestic adjustment problems and, in particular, by the uncertainties and short-run costs of implementing economic reform programmes.

Some East European countries' high external indebtedness and the unwillingness of others to allow their foreign debt to increase reinforce this downbeat forecast in the ECE's view.

East-West trade stagnated in 1987 with the exception of a rise in the volume of Soviet exports. The outlook for a revival is unfavourable, the ECE believes, although one aim of economic reform in the East bloc is to increase export incentives.

In East Europe restraints on imports from the West were prolonged in 1987, in order to prevent further deterioration in current accounts, which had moved into a small, combined deficit in 1986. East European net debt rose from some $65bn to an estimated $75bn at the end of 1987, most of the increase, however, being due to the effect of the depreciating dollar on valuations.

The Soviet Union brought its trade account with the West into balance last year after two successive years of deficit. Since its terms of trade had fallen sharply, the adjustment involved an increase in the volume of exports – 21 per cent in 1986 and a further 5 per cent in the first nine months of 1987 – and a large cut in imports of 10 per cent in the first three quarters of 1987.

Moscow's current account surplus rose markedly last year to almost $7bn. However, the ECE says this came almost exclusively from trade with developing countries, apparently yielded little cash and produced no corresponding reduction in the Soviet Union's net external debt. On the contrary exchange rate changes raised it from $28bn to $26bn.

Soviet terms of trade and balance of payments will be under renewed pressure in 1988, the ECE predicts. It discounts the possibility at this point of any burst in Soviet borrowing in support of import expansion.

Eastern decision-makers are presented with serious problems by their stagnating exports and payments constraints, the ECE states. On the one hand, boosting imports would require a higher level of indebtedness. On the other hand, import restraint is likely to hinder domestic growth and the modernisation drive.

However, the ECE points out modernisation is of key importance, if the East is to improve its export capacity, reverse its decline in international competitiveness and move towards currency convertibility.

Red Cross condemns chemicals use in Iraq

By Andrew Gowers, Middle East Editor

INTERNATIONAL condemnation of the renewed use of chemical weapons in the Iran-Iraq war intensified yesterday as Iran fired another missile on Baghdad and Iranian gunboats attacked a Cypriot tanker in the Gulf.

The International Committee of the Red Cross issued a strongly-worded statement in Geneva condemning the use of the weapons following evidence of severe casualties from chemical attacks in the town of Halabja in an area of north-eastern Iraq occupied by Iran, and said it had taken "urgent steps" to bring about an end to their use.

The attacks, in which Iran says some 5,000 Iraqi civilians were killed last week, have been widely blamed on Iraq. Baghdad has consistently denied having used chemical weapons, despite evidence to the contrary published by UN inspection missions.

The ICRC said: "The use of chemical weapons, whether against military personnel or civilians, is absolutely forbidden by international law and is to be condemned at all times." It has told Iran it is ready to send emergency assistance.

Meanwhile, Iran said it had fired a missile at a military centre in Baghdad in retaliation for an Iraqi missile attack on Tehran on Tuesday.

In the Gulf, gunboats hit the Cypriot tanker Odysseas H in the sixth Iranian attack since Sunday.

Moves were also afoot yesterday to try to defuse trouble at this year's Hajj, the Moslem pilgrimage to the Saudi holy cities of Mecca and Medina.

After a meeting of Islamic foreign ministers in Amman, Prince Saud al-Feisal, the Saudi Foreign Minister, announced that the number of pilgrims this July would be fixed by quotas.

This is thought to be a ploy to restrict the size of the Iranian contingent, which caused serious riots last year. Normally 150,000 Iranian pilgrims go on the Hajj.

South African church-state conflict likely to worsen

BY ANTHONY ROBINSON IN JOHANNESBURG

THE SCENE has been set for a church-state clash in South Africa. Relations between the leading Christian churches and the white Nationalist Party Government have seldom, if ever, been more polemical or strained.

The conflict between religious and secular leaders, which has been looming for many months, erupted shortly after the Government in effect banned 17 extra-parliamentary black political organisations last month. This was quickly followed by a statement from Anglican Archbishop Desmond Tutu that the churches would fill the resultant vacuum and take over the anti-apartheid struggle.

His defiant statement came hours after he was detained by the ever-obliging South African police while attempting to lead a protest march on Parliament. The propaganda advantage of being arrested, alongside the Rev Allan Boesak, the Coloured Dutch Reformed Church leader, Catholic Archbishop Stephen Naidoo and other senior clerics, was re-inforced when, for good measure, the police water-hosed other churchmen in front of the world's television.

The church-state conflict arises from the Government's increasingly severe restrictions on formal black political activity. Ultimately South Africa has politicised churches, schools, trade unions and the like because blacks are deprived of formal political representation or the vote in national politics.

The forces which led to political apartheid are reflected in institutions such as the churches which mirror the tensions of an ethnically and politically polarised society. The divisions are no longer exclusively ethnic but are increasingly ideological and political. The white Dutch Reformed Church for example is now split along lines which reflect the political split between the nationalist and conservative parties.

So is the Anglican Church, which has experienced an exodus of well-heeled, traditional English-speaking white members in response not to the election of a black man as Archbishop per se but, defectors argue, because of his political stance in favour, for example, of disinvestment and sanctions.

Although Archbishop Tutu's personal warmth, humour and religiosity have endeared him to some originally sceptical white members of what is now an overwhelmingly black church, his stewardship has also provoked opposition from some influential black Anglicans.

It is a church which includes Mr Oliver Tambo, the ANC leader in exile, among its members and also embraces Chief Mangosuthu Buthelezi, his rival Inkatha leader. But the Archbishop, a former patron of the United Democratic Front, ostentatiously excluded Chief Buthelezi from the enthronement guest list two years ago. Instead the Archbishop invited celebrities from abroad, especially the US, where his skill with the witty one-liner and mastery of television leaves the tongue-tied Afrikaner spokesmen for Pretoria in the shade.

Stripped to basics the personal and political resentment of men such as President Botha, whose own experience of the media has left him with a dangerously volatile mixture of contempt and fear, boils down to anger that the Afrikaners' dogged attempt to create a more just, fairer society are being sold short by men like Archbishop Tutu and Dr Boesak.

For the President and many who think like him the nation's political priests are tantamount at best to Stalin's "useful idiots" or at worst to closet Marxists hiding behind "the structures and the cloth of the Christian church".

Such are the ironies of South Africa. The overwhelming majority of the population profess the Christian faith according to their different lights. The thriving Jewish, Moslem and other communities all pray for peace and reconciliation. But the traditions and customs which reflect the wider divisions of society remain unaltered.

Canberra firm after poll upset

By Chris Sherwell in Sydney

AUSTRALIA's Labor Government has re-affirmed its tough stance on economic policy despite the loss of electoral support last weekend – with Mr Paul Keating, the powerful Treasurer, leading the way.

The party suffered a major defeat in New South Wales and a drain of support in polls in three other states, prompting fears that the Government, headed by Prime Minister Bob Hawke, would retreat from its ambitious economic adjustment programme.

But in a barrage of remarks over the past two days Mr Keating and other economic ministers and officials have made it clear that any review would only affect presentation, not policy.

Mr Keating yesterday admitted the loss in New South Wales was not only because of a feeling that, after 12 years, it was time for a change of state administration. He said it also reflected the fall in living standards as the country grappled with its current account deficit.

But he insisted that the Federal Government's strategy to deal with that external imbalance – tight monetary and fiscal policy – was producing positive results and had to be continued.

The current account, he declared, was the main game. "Win it and we will lift living standards for all. Lose it and we not only forfeit political survival but, more importantly, we fail our traditional constituency."

Eritreans claim big victory over Ethiopians

BY MICHAEL HOLMAN, AFRICA EDITOR

FIGHTING between the guerrilla army of the Eritrean People's Liberation Front and troops of the Ethiopian Government was reported to be continuing yesterday in what is seen as one of the most critical battles in the 26-year conflict.

Earlier this week the EPLF announced that it had captured the town of Afabet during a big offensive launched last week. The guerrillas claimed that three Ethiopian divisions had been "put out of action", and two Soviet officers had been captured. A Soviet spokesman in Moscow confirmed this week that the officers had "gone missing".

Speaking on Monday from an EPLF base in Eritrea, Professor Basil Davidson, the British historian, told BBC radio that the EPLF had won "a major victory". The Front had captured 50 Soviet-built tanks and taken "enormous numbers" of prisoners, he said.

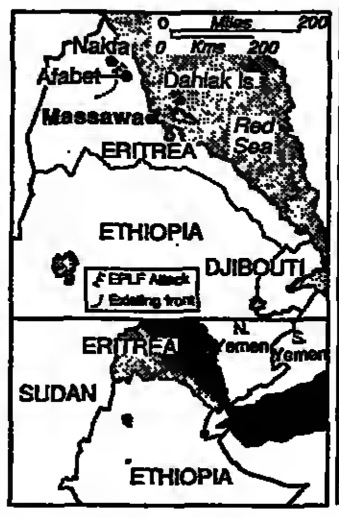
Prof Davidson estimated that one-third of the Ethiopian forces in Eritrea had been "wiped out", though he expected the Government to regroup its forces for a further battle.

EPLF officials said yesterday that fighting was continuing 20m from Keren, Eritrea's second largest town.

Most observers believe, however, that the EPLF cannot win the war militarily. Instead they must hope that the cost of the conflicts in Eritrea and Tigray proves to be one of the factors leading to a change of government in Addis Ababa, which might in turn lead to a negotiated end to the fighting.

The EPLF and its predecessor, the Eritrean Liberation Front, have been seeking the restoration of Eritrea's autonomous status, lost in 1962 after the Eritrean national assembly voted to merge with Ethiopia. Eritrean nationalists argued that the Addis Ababa Government, then led by Haile Selassie, had manipulated the outcome and what has become Africa's longest war got under way.

At stake for the Soviet and Cuban backed Government of Mengistu Haile Mariam, which overthrew Haile Selassie in 1974, are the post-1962 boundaries of a state challenged by guerrilla movements in the province of Tigray as well as Eritrea. A vital strategic concern for the Government is the fact that Ethiopia's main port of Massawa is in Eritrea and there is an important Soviet naval base on the Dahlak Islands, lying off Massawa in the Red Sea.



Taiwan halts N-fuel work

By our Foreign Staff

TAIWAN HAS yielded to US pressure to stop work on a secret installation that could have processed fuel to extract plutonium, a key component of nuclear weapons, according to American press reports yesterday.

US officials quoted in the New York Times said the effort to build an installation capable of plutonium extraction violated a secret commitment to the US that it would not undertake research to develop atomic weapons.

US, Egypt in arms accord

THE UNITED States and Egypt have agreed on closer co-operation in arms development, raising Cairo to the same military partnership with Washington as Israel and Nato allies, Pentagon officials said yesterday, Reuter reports from Washington.

The officials said Mr Frank Carlucci, US Defence Secretary, and Abdel-Halim Abu Ghazala, Egyptian Defence Minister, were going to sign a memorandum of understanding on the agreement at the Pentagon late yesterday.

They said that the US-Egypt memorandum would facilitate exchanges of scientists and engineers and co-operation in research, development and procurement of military equipment between the two countries.

Egypt, which for years depended on the Soviet Union for its military equipment, has recently become one of America's closest Arab friends in the Middle East.

Israel and the United States signed a similar 10-year memorandum of understanding at the Pentagon last December.

Egyptians watch Nasser's life-and-death melodrama

BY TONY WALKER IN CAIRO

EGYPTIAN melodramas, heavily embroidered with family tragedy and intrigue, are almost a cliché on the television screens of the Arab world. But in Cairo these days the real thing is being substituted for fantasy in the case of Mr Khaled Abdel Nasser, son of the late President. He is accused of complicity in the murder of Israeli diplomats and the wounding of American officials.

It would be tempting to present the case as an Egyptian version of Dallas, the American soap opera, if there were not life-and-death issues involved. The imaginative Egyptian press has excelled itself in the re-telling of juicier elements of the scandal that has touched some of the country's leading families.

There have been stories of sexual orgies, wife-beating, cocaine use and bloody familial conflict. They have involved some of those (though not Mr Khaled Nasser) accused of membership of the Egypt's Revolution group which claimed responsibility for a series of shootings between 1984 and 1987.

Beyond the scandal and the gossip, however, the case has a deeply worrying political dimension for the Government of President Hosni Mubarak.

The bringing to trial of President Gamal Abdel Nasser's son over alleged involvement in actions against Israelis and Americans has stirred nationalistic and xenophobic passions in a country burdened by its Nasserite past and politically sensitised by conflict in the West Bank and Gaza.

Mr Mubarak has felt obliged on a number of occasions recently, amid a clamour of criticism from almost all opposition groups, to defend the right of the prosecutor's office to commit Mr Khaled Nasser and 19 others to trial.

The President's defence of the independence of the judiciary has not quietened the protests.

Professor Saad Ibrahim, one of Egypt's leading sociologists, believes the reaction to the Nasser case is revealing of current Egyptian attitudes.

"The conflict is between legality and legitimacy," he says. There is a widespread feeling that enough violations have been committed by the Israelis supported by the Americans *vis-a-vis* the Palestinians that this whole affair should not be treated as an isolated incident. It should be put into the framework of the Arab-Israeli conflict, and once you put it into that context you have to weigh the actions of all parties."

A complicating political factor, as far as the Government is concerned, is the apparent involvement of the American embassy in Cairo in the case.

Last August, Mr Ahmad Essameddin, brother of Mr Mahmoud Noreddin, the alleged leader of the Egypt's Revolution group, is widely reported to have contacted the US mission with details of the group's activities.

Khaled Abdel Nasser

While the circumstances of Mr Essameddin's defection are murky – he is said to have feared for his life after a family row – there seems little doubt that information he provided to the US embassy helped in the arrest of the alleged ringleaders of the Egypt's Revolution.

Opposition figures, including prominent lawyers, have seized on the apparent US involvement in the case (Mr Essameddin, who is a principal defendant, reportedly sought refuge in the embassy compound) to argue that this represented a violation of Egypt's sovereignty and that Mr Essameddin's testimony should be disallowed. The American connection is a political embarrassment to the Government.

Egypt's Revolution, whose literature indicates it is a neo-Nasserite group committed to the abrogation of the peace treaty with Israel, has claimed responsibility for the murder of Israeli officials in Cairo – in August 1985 and March 1986 – and for the wounding of two US embassy staff, including the head of security, as they drove to work last May.

Among 20 defendants in the case, including Mr Khaled Nasser who has taken refuge in Yugoslavia, are Mr Gamal Shawki Abdel Nasser, nephew of the late President, who also fled into exile, and Mr Sharif Hussein el Shafei, son of Mr Hussein el Shafei, a former vice-president and a member of the group of army officers who carried out Egypt's 1952 revolution led by Mr Gamal Abdel Nasser.

Mr Khaled Nasser, a 38-year-old engineer who fled first to London last September and then to Belgrade, claiming his life was in danger from the Israeli Mossad, has helped to keep the political pot boiling in Egypt by issuing a series of statements appearing to defend the activities of Egypt's Revolution.

Dr Ibrahim, explaining evidence of public support for Mr Khaled Nasser, said it was "an occasion for the pouring out of public sympathy for the memory of Nasser who still remained tremendously popular with the middle and lower classes."

The issue had also arisen at a time of frustration in the community over rising prices and food shortages.

Dr Ismail Sabri Abdallah, a member of the central committee of the left-wing Tugammu party, said that from the standpoint of the "simple Egyptian in the street, to kill an Israeli is not a crime."

He said, however, that the left should approach the case cautiously "because you cannot play the democratic game two ways. We want the rule of law and independence of the courts. We can't say that for political reasons the courts can't judge."

There is little doubt the Nasser case has been a fillip for the left in Egypt which has been eclipsed recently by the religious right.

A serious worry for the Government is the extent to which the neo-Nasserite Egypt's Revolution enjoys the support of elements of the military. Several army officers are among the accused, and reports persist that a larger number of military figures were involved.

The memory of President Nasser remains strong in a military which has found that since the peace with Israel, its political role has diminished.

It was it underlines the sensitivity of the case in Egyptian politics that Mr Mubarak chose a meeting of senior and middle ranking army officers to make his first public comment on it. Late in February, soon after charges were laid, he assured the gathering that "this will not affect the name or history of Abdel Nasser."

Mr Mubarak, a former air force commander, owes some of the legitimacy of his own position as a leader of the administration, still dominated to a degree by the military, to President Nasser's legacy.

Egyptian observers are already comparing the forthcoming trial of Mr Khaled Nasser, either in person or *in absentia*, with the case of Lieutenant Khaled Islambouli, the leader of the Islamic Jihad group that assassinated President Anwar Sadat. That, too, in the view of most Egyptians was a political trial.

"It is not," as Dr Saad Ibrahim observed, "an easy situation for the Government, caught between its obligations to observe legality on the one hand and the pressure of public opinion on the other which is sympathetic to the accused."

AMERICAN NEWS

Nicaraguan talks close to deal on ceasefire

By Robert Graham

TALKS between the Nicaraguan Government and the US-backed Contra rebels were yesterday close to a breakthrough in agreeing to a ceasefire in the war that has bitterly divided the country for more than six years.

Both sides were optimistic as they began a third day of talks at Sapoa, near Nicaragua'a border with Costa Rica. Earlier, General Humberto Ortega, leading the Sandinista delegation, said he expected "concrete results" to emerge from the discussions.

It is the first time the Sandinistas have talked directly to the Contras on Nicaraguan soil. The talks are being held within the framework of the Central American peace agreement signed last August, and have gone ahead despite a big Sandinista offensive against the Contras which caused serious tension with Honduras and led the US last week to despatch 3,200 troops there.

Negotiations have now centred on the mechanics of a ceasefire as a prelude to the opening of a broader dialogue with existing legal parties inside Nicaragua. Sandinista officials said much bargaining remained which could lead to a further day of talks. They were anxious to go as far as possible in reaching an agreement during these sessions.

The Sandinistas are proposing a 90-day truce, with a new concession permitting Contras who lay down their weapons to be free of all prosecution and at liberty to be involved in politics. Another concession on the table is a pledge to free one political prisoner for every Contra adhering to the truce. There are 3,200 political prisoners, mostly ex-members of the Somoza regime National Guard.

The Contras are proposing a 45-day ceasefire while a permanent truce is negotiated that would also allow full political freedoms. During the ceasefire the 10,000 strong Contra force inside Nicaragua would be grouped in special zones.

The difficulty for the Sandinistas is that they do not want to be seen negotiating political concessions at this stage. These talks they regard as exclusively military. Discussion of the future role of the Contras and their supporters must take place within the context of a "national dialogue" with all the other political parties, they insist.

James Buchan in New York and Nick Bunker in London on lawsuits brought against leading insurers

US states allege insurance conspiracy at the Garrick

THE GARRICK Club, a gloomy Italianate building in London's Covent Garden, is a good place for conspirators. According to court papers filed in San Francisco on Tuesday, conspiracy was on the minds of a group of leading insurance men from the US and the London market who met at the club for dinner on July 4, 1984.

At the dinner, according to lawsuits filed by eight US states on Tuesday, were representatives of the US industry and the leading Lloyd's underwriters of US casualty reinsurance, led by Mr Robin Jackson and Mr Richard Hazell. The lawsuit says that the Lloyds men were "almost militant" in saying that they would no longer bear losses by laying off in London a type of US insurance known as comprehensive general liability (CGL).

This is the type of insurance bought by businesses, states and municipalities to protect themselves from their liability for injury or damage from products or at schools, day-care centres, tramways or waste dumps. In a period of heady expansion from the mid-1970s, the industry had competed vigorously to write these policies.

But the risks of the cover are hard to quantify because damages can take years to appear. By 1984, the industry faced big losses from "long-tail claims" on policies written years before.

In insurers' eyes, the 1980s had shown a dangerous escalation of a trend towards inflation in damages awards by American juries, and a tendency for judges to interpret ever more broadly definitions of an insurers' liability.

There were other looming threats. First, damages claims by asbestos victims against US corporations were mounting. Second, in 1980 the US had passed the so-called Superfund law, which made clean-ups of toxic waste dump sites compulsory. Lloyd's underwriters were appalled when they were sued by Shell Oil for the cost of cleaning up the Rocky Mountain Arsenal, a site in Colorado.

Third, the apparent explosion of long-tail claims coincided with falling interest rates, which cut back on insurers' investment income, and a price war. In 1984, the US industry plunged to a $3.8bn operating loss. The next year the loss was $5.4bn.

So – according to lawsuits filed on Tuesday by eight US states – the Garrick Club meeting was one of many secret confabulations behind a vast Transatlantic conspiracy to restrict liability coverage. The suits allege that four leading US insurers – Aetna, Cigna, Allstate, Hartford Fire – conspired with US reinsurers and the leading Lloyds North American non-marine underwriters to force the whole industry to reduce cover and drive up premiums in the so-called "liability crisis" of 1984-86, when the availability of liability insurance dwindled severely.

The states have been bitter about the crisis ever since. One factor which in the past appeared to limit their scope for action is

Clements: "one-way street in favour of insurance companies."

that the US insurance industry has a partial exemption from federal antitrust laws. The argument is that insurers need to pool some information to enable them to price their policies properly.

But the suits say the industry engaged in "boycott, coercion and intimidation" – which are not granted immunity from antitrust laws. The suits will ask the court to force the industry to restore cover and provide money damages to compensate state agencies and fund a trust to cover claims that arise from risks uninsured during the crisis.

According to the New York State suit, the Garrick Club meeting was followed, on September 1984, by another club dinner, in New York. The host was the Insurance Services Office, which writes standard policy forms for use by the primary insurers. The guests were the Lloyd's men and the big US reinsurers. The reinsurers told their host that they would withhold reinsurance for commercial general liability unless the ISO changed its forms to restrict the insurers' exposure.

The key change, which was adopted by ISO next day, restricted liability cover only to damage that occurred during the life of a policy – so-called "claims-made" cover. The new forms excluded all pollution coverage. Lloyd's underwriters held a meeting in London which agreed to boycott one of the most unpredictable risks – pollution cover. An agreement, with 40 signatures, is in the court papers.

But the claims-made policy was surrounded by an element of controversy, and encountered strong buyer resistance, because it appeared to deprive the policyholder of certainty of insurance coverage. Mr Bob Clements, president of Marsh & McLennan, the biggest US insurance broker, has called it "a one-way street running in favour of the insurance companies."

All four US companies, the ISO and yesterday the Lloyd's underwriters say they have no case to answer.

Mr Stephen Merrett, a leading Lloyd's underwriter, said: "We are confident that there is no substance in any of their charges," he said.

Mr David Seifer, a First Boston insurance analyst, commented: "It's going to be a hard case to prove. Insurance companies are lemmings, they're not colluders."

Brazil's historic vote leaves Sarney firmly in the saddle

The congress vote for a presidential-style constitution shows the power of the military, says Robert Graham, Latin America Editor

PRESIDENT Jose Sarney of Brazil now seems determined to remain in office for a full five-year term, until March 1991, after the historic vote in Congress on a new democratic constitution.

The president has fought a tough rearguard action, backed by the military, to serve a full term in office even though he has not been elected. (He became president in 1985 following the death of President-elect Tancredo Neves.) The vote on Tuesday was a victory for Mr Sarney, with his supporters in the Congress voting 344 to 212 in favour of a strong executive president.

Opponents had sought to impose a parliamentary system with effective executive power in the hands of a Prime Minister. Having lost this battle, Mr Sarney's opponents are expected to try to curtail the length of his tenure. A vote on this issue could take place by May.

If Tuesday's vote had gone against Mr Sarney, direct elections would have been held almost certainly this year.

Uncertainties over the length of Mr Sarney's mandate will continue to hamper the hand of Mr Mailson de Nobrega, the Finance Minister, who is demanding the implementation of a tough austerity policy. Until now Mr Sarney has shrunk from placing economic considerations above those of his own tenure.

Tuesday's vote demonstrated, as if there were ever any doubt, the power of the military in Brazilian politics. Their role will become even more important in future months.

Military ministers made aggressive speeches warning of the "chaos" elections would cause. Soldiers met congressmen and businessmen privately to warn them of the possibility of an "institutional reverse" – code for a coup – if elections were called this year. Mr Jose Marcio Mendonca, a political columnist, said: "It was to the military that President Sarney appealed when he feared he might lose and it was they who got more results."

The presidential Planalto Palace dipped deeply into its wealth of patronage and relied heavily on the influence of state governors to win Tuesday's vote. Most of the governors have run out of money: they will want to be rewarded for their loyalty, as will many congressmen. Mr Sarney cannot afford to be as hard-fisted as Mr Nobrega would like, since the Congress will vote on the length of his term towards the end of April.

This creates a problem for the Government, since it too is running out of money. Brazil urgently needs more loans from its foreign creditors, to avoid exhausting currency reserves by April. The creditors demand the Government spend less before lending it any more money.

A despairing Mr Nobrega hopes that Mr Sarney now feels confident enough to deal with the federal deficit that is pushing inflation up by about 20 per cent a month. He is warning that the federal payroll will exceed tax revenues by December unless something is done now.

Congress delay on Gephardt amendment

By Nancy Dunne

CONGRESSMEN working on the US Omnibus Trade Bill have delayed consideration of the controversial Gephardt unfair trade practices amendment until after the Michigan caucuses on Saturday.

The House of Representatives is sticking to its line, unacceptable to the Administration, which would transfer authority for determining trade violations and taking action on them from the President to his Trade Representative.

Further, the House is insisting on adding to the list of a nations' unfair trade practices, the following: export targeting, a "persistent pattern of conduct" which denies workers rights, and restrictions on market access.

Discussions between the House and Senate are expected to lead to rejection of the Gephardt amendment. This authorises US trade barriers against any country showing persistent trade surpluses and found guilty of unfair trade practices.

Dukakis comes out for tough trade laws

BY LIONEL BARBER IN WASHINGTON

GOVERNOR Michael Dukakis of Massachusetts, the front-runner for the Democratic presidential nomination, has shifted his campaign in favour of tough new trade legislation.

The shift appears aimed at delivering a knock-out blow to Congressman Richard Gephardt of Missouri, the economic nationalist whose future as a Democratic candidate rests on the Michigan caucus results this Saturday.

But it has brought charges of "flip-flopping" because Governor Dukakis has spent much of his campaign boasting his free-trade credentials and attacking Mr Gephardt for backing a protectionist trade policy.

Mr Dukakis has also said publicly that the President has all the powers he needs to combat unfair trading practices, and therefore does not need extra authority as provided by the Gephardt amendment to the Omnibus Trade Bill.

On entering Michigan, where trade and jobs are key issues in a state dominated by the domestic US car industry, Mr Dukakis began to back-pedal.

This week, he endorsed legislation backed by the local Democrat and US Senator, Mr Don Riegle. In turn, Senator Riegle endorsed Governor Dukakis.

The cash-rich Dukakis campaign needs a win in Michigan to compensate for a poor third performance in the last Democratic primary election in Illinois, likewise a northern industrial state. He is currently leading in the polls, just ahead of the Rev Jesse Jackson and with a big lead over the cash-starved Mr Gephardt, and fellow rivals Senator Albert Gore of Tennessee and Senator Paul Simon of Illinois.

Governor Dukakis was expected yesterday to pick up a big-name endorsement in the shape of Senator Bill Bradley of New Jersey, often mentioned as a dark horse nominee in the event of a deadlocked Democratic national convention. The Bradley endorsement should help him in delegate-rich New Jersey primary on June 7 which along with California are the last big events before the convention in Atlanta in July.

Revised estimates show faster US growth

By Anthony Harris in Washington

THE US economy grew even faster in the final quarter of 1987 than previous estimates suggested, according to the latest revision of the figures by the US Department of Commerce. The new estimate is that gross national product grew at an annual rate of 4.8 per cent, compared with 4.2 per cent in the first estimate, and 4.5 per cent in the first revision.

The figures still show that stockbuilding was by far the strongest component of final demand, accounting for more than three quarters of the total, though the estimate for the rise in non-farm inventories has been revised downwards slightly. When this figure was first announced, it led to widespread forecasts of a sharp slowdown in the economy, but subsequent evidence has shown that this was probably misleading.

The main significant change in the new estimates is an upward revision of consumer spending, though this is still shown as sharply down from the third-quarter peak, just before the October stock market crash.

Meanwhile, the new figures for consumer prices, also published yesterday, maintain the subdued inflation trend of recent months. Prices rose 0.2 per cent in February.

UN vote again attacks move to shut PLO office

By Our UN Correspondent

The United Nations General Assembly yesterday again attacked the US decision to close the Palestine Liberation Organisation's mission.

With only the US and Israel opposing, the General Assembly deplored the failure of the US as host country to comply with its obligations under the 1947 agreement that established the UN's headquarters in New York.

Mr Herbert Okun for the US said the Administration had objected to the congressional law that ordered the closing of the mission. A Federal court is to decide the case.

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EC threatens to impose levies on underpriced ships

BY WILLIAM DAWKINS IN BRUSSELS

THE European Commission yesterday threatened to demand the imposition of punitive port levies on unfairly underpriced Japanese and South Korean vessels visiting the Community, unless the two countries strike an accord with the EC on fair competition in shipbuilding.

The move follows EC shipbuilders' demands for protection against price-cutting by Far Eastern shipyards, mainly in South Korea, where ships have been sold for less than the cost of production.

It will be welcomed by European shipbuilders as a sign that the Community is prepared to keep alive at least some of the industry and its 93,000 jobs.

Brussels trade experts are to start talks with their Japanese and South Korean counterparts shortly. Mr Willy de Clercq, European Commissioner for external trade, is to produce details of how the levies would work by the end of June. If the discussions appear to be making no progress, he will ask member states' consent to put the fines into effect.

The fines would apply to "abnormally priced" vessels built in Japan or South Korea, irrespective of registration.

They would only apply to ships ordered after January 1, 1989, and would be payable whenever vessels load or unload at EC ports.

Brussels hopes the talks will result in ways to "stabilise the market", including setting prices at profitable levels, reducing huge disparities in state aid, and "equitable" capacity reductions.

Yesterday's move is a recognition that EC rules allowing its shipbuilders a limited amount of state aid - 28 per cent - are failing to bridge the gap in costs between Community yards and their Far Eastern competitors.

Mr Alain Grill, chairman of CESA, the committee of EC shipbuilders' associations, said: "This encouraging initiative is a further important signal to our Far Eastern competitors that they cannot solve their problems to the disadvantage of European shipbuilding."

Despite the Japanese industry's problems, Japan and South Korea are the main external factor in EC shipbuilding's decline from just over 28 per cent of the world market in 1975 to around 13 per cent now. The Commission says Japan holds nearly 47 per cent of the world market, and South Korea 17 per cent.

Japanese shipyards reduced capacity from 6m compensated gross tons to less than 4.7m tons last year, and the Japanese Ministry of Transport is predicting another cut this year.

Hyundai wins Canadian ruling on dumping cars

BY DAVID OWEN IN TORONTO

THE Canadian Import Tribunal yesterday ruled that the dumping of Hyundai cars on the Canadian market has not materially injured the domestic car industry.

The decision, which followed a dumping complaint against the South Korean car maker by the Canadian subsidiaries of General Motors and Ford, deals a severe blow to Detroit's attempts to control the growth of imports in the North American car market.

GM and Ford were widely believed to be treating the current complaint as a test case before launching similar challenges to importers to the US market. Japanese companies account for about 20 per cent of the cars sold in North America.

The tribunal also ruled that duties already charged on Hyundai cars will be refunded. The Canadian revenue department had earlier found that Hyundai had been dumping cars and imposed preliminary duties.

Hyundai last year sold some 51,000 vehicles in Canada for a market share of 4.8 per cent. Its sales in the US totalled 264,000 or 2.6 per cent of that market.

Mr George Peapples, president and general manager of GM's Canadian subsidiary, said the company was disappointed.

£193m credit deal for Armenian factory

By Peter Montagnon, World Trade Editor

MORGAN GRENFELL yesterday signed a £193m export credit package for the Soviet Union to finance the £246m contract won by Simon-Carves last December to establish a plant automation equipment factory at Yerevan in Armenia.

The deal, which comes under the umbrella of last year's Soviet/UK trade finance protocol, is the first sterling buyer credit for the Soviet Union to be signed since 1978, Morgan Grenfell said yesterday.

The entire £193m package will be guaranteed by the Export Credits Guarantee Department but, because the contract includes equipment to be supplied by Yugoslavia, ECGD will only provide interest subsidies on £160m of the total.

Morgan Grenfell said it had therefore incorporated into the package a £33m fixed-rate 11½-year sterling loan on which interest subsidies will not apply. The loan started life as a floating rate credit provided by the bank itself which was then swapped into fixed-rate finance in the international capital markets.

Such swap operations are still relatively rare in the export finance market. They are difficult to arrange because of the length of the final maturity as well as the complex drawdown and repayment schedules required by end-borrowers.

Morgan declined to disclose details of this operation, but said the fixed interest rate worked out below the 10.4 per cent maximum currently permitted on long-term sterling export credits.

The interest subsidy on the £160m portion will be struck at 9.8 per cent, which was the maximum permitted at the time the Yerevan contract was signed, though as with other credits under protocol the exporter will have to finance a further subsidy to bring the rate paid by the Soviet side into line with its own requirements.

This portion was syndicated through a group of banks that also includes Moscow Narodny and Bank of Scotland as well as the four UK clearers.

Separately, Morgan Grenfell and Midland Bank said they have each signed £50m lines of credit under the Soviet/UK protocol to finance sales of UK capital goods and equipment.

Peter Montagnon on moves towards a common code of checks on export goods

The pitfalls of pre-shipment inspection

FEW ISSUES OF practical trade policy arouse such vehement emotion in exporters as that of pre-shipment inspection or the developing country practice of employing independent companies in the industrial world to check on the price and quality of goods they are buying from foreign suppliers.

Over the past couple of years, first in the US and now increasingly in Europe, businessmen have been complaining bitterly about the way in which the inspection process causes them delay, extra expense and infringes what they see as their right freely to negotiate a price with their customers overseas.

The four main inspection agencies – Societe Generale de Surveillance and Cotecna Inspection of Switzerland, Bureau Veritas of France, and Specialist Services International of the UK – have become the bogeymen of the export world. Yet at a conference organised by the International Chamber of Commerce (ICC) in Birmingham this week it became clear that mud-slinging is finally beginning to give way to serious talk on the inspection industry's future.

Not only have the inspection companies themselves begun to move in the direction of a common code of practice. Governments, including those of the EC and US, are now taking up the matter in the context of the Uruguay round of multilateral trade negotiations, and the business community itself as represented by the ICC is also working on a code of conduct.

In itself the idea of preshipment inspection is not particularly controversial. Most exporters accept the need for some form of inspection to counter malpractice and acknowledge that it sometimes occurs.

For developing countries facing capital flight and an acute shortage of foreign exchange this is a serious problem. Mr J.E.B.Haizel, a Ghanaian trade official, said his experience with imports over the ten years to 1986 had produced evidence of "blatant cheating on the part of both importers and exporters and sometimes collusion between the two." Mr Munga Wa Mbasa of the Office Zairois de Controle said the use of inspection agencies yielded foreign exchange savings worth three or four times the inspection fees.

The real controversy lies, however, in the degree of power wielded by the inspection agencies themselves. Exporters complain that their decisions, particularly on pricing, often seem abritrary, that they are taken late in the day when the goods may have already been shipped and that there is no independent right of appeal.

Evidence that this view now finds some sympathy in government circles came from Mr Bruce Butterworth of the US Department of Transportation who said the inspection agencies enjoyed a monopoly position, and that their operations were obscure and not subject to international discipline.

Like the EC, he said, the US now wanted this subject to be covered in the Uruguay round under the rubric of non-tariff barriers to trade. Mr David Love, of the UK Department of Trade and Industry, said such a multilateral route was preferable to national licensing arrangements because it would involve developing countries who employ inspection agencies.

He said he hoped that a comprehensive and binding code of practice would emerge in the General Agreement on Tariffs and Trade (Gatt) which would ensure that the criteria used by inspection agencies for checking on shipments were reasonable, relevant and transparent. It should also involve a neutral and speedy dispute settlement process, he said.

This approach is one that suits the inspection agencies themselves who have banded into a federation to argue their case.

Though West Germany has adopted a licensing system for preshipment inspection agencies, the federation opposes formal licensing, according to Mr Robert Wareham who chairs its sub-committee on the issue. "The laws of the various supplying companies differ so much that it is quite unlikely that uniform provisions could be enacted. Some countries may even refuse to legislate in the matter," he said.

Exporters attending the Birmingham conference said that governments now seemed to be much more willing to tackle the problem than they were in the past, but several expressed doubts over the efficacy of the Gatt approach.

"My fear with the multilateral code is particularly with the time that it's going to take," said Mr Ian Campbell, Chairman of the British Exporters Association. Some form of licensing at least at EC level was required urgently, he added.

Among the concerns of exporters with the Gatt solution is that it still may not be comprehensive enough. It would leave out exporting countries like Taiwan which is not a member of the Gatt and where, according to Mr Campbell, preshipment inspection is "a sham and a pretence."

The 26 developing countries who use agencies to monitor their imports also include many who are either not members of the Gatt or who do not subscribe to its relevant codes like the Customs Valuation Code. It might therefore prove difficult to enforce a multilateral code, they argue.

Moreover some doubt whether a Gatt code could deal effectively with the risk of corruption inherent in any inspection system or with the need to ensure that the agencies themselves are adequately staffed and qualified to perform the work they set out to do.

What is now clear, however, is that the debate is moving forward towards some form of control over an industry that up till now has operated largely under its own rules. The inspection industry is now fully mature, said Mr John Beck of the EC Commission. "It deserves to be regulated like all other industries in a manner that does make it more accountable, more transparent."

NSW government drops plan for Sydney casino

BY CHRIS SHERWELL IN SYDNEY

INTERNATIONAL tenderers bidding to operate the world's largest casino in Sydney have lost out - the newly-elected Liberal and National party coalition government in New South Wales has called the plan off.

The 400-table casino was part of a A$600m (£245m) hotel project located in Darling Harbour, an old dockland area near the Sydney harbour bridge which is being re-developed under a project initiated by the now-ousted Labor government.

Both the redevelopment and the casino generated heated controversy, and contributed in a small way to Labor's heavy defeat over the weekend. The casino, in particular, became a source of embarrassment.

Originally supposed to have opened this year to coincide with Australia's bicentennial celebrations, it became the victim of a mishandled tender process which caused protracted delays.

Back in August 1986, the state government suddenly reversed its decision awarding the contract to a consortium linking Harrah's of the US with a local construction company.

The reversal followed adverse police reports on individuals involved with the consortium, and meant fresh tenders had to be called.

Within months these, too, ran into the ground, Harrah's, now with a new partner, was dropped again, apparently after disagreements over the state's demand for a 30 per cent tax on casino revenues. Labor, committed to building a casino, ordered a third round of bids, but this time separated tenders to operate the casino from those to construct the large hotel which would house it.

This attracted 10 applicants. Most who had previously applied did so again, and they were joined by new ones. All were being scrutinised by the authorities for approval

Renault chief urges protection

BY KEVIN DONE, MOTOR INDUSTRY CORRESPONDENT

MR RAYMOND LEVY, chairman of Renault, the French state-owned automotive group, issued a strong plea yesterday for far-reaching protection of the European car industry, chiefly against Japanese imports.

He called for the Japanese share of the European car market to be "frozen" at the current level of around 10 per cent.

He said that Renault had "very mixed feelings" about the setting up of Japanese car plants in Europe, and warned that projects such as Nissan's car plant in north-east England or Honda's co-operation with Austin Rover for local production of Honda cars in the UK, would create overcapacity in the European industry.

"If they come to your country with automated plants and lower production costs, their competition will have the same effect as large imports. The Europeans are going to have to close plants and fire people."

Mr Levy warned strongly against the consequences of creating a single market in the European Community from 1992 without imposing curbs on imports, particularly from Japan and newly-emerging car producers such as South Korea.

"We are going to destroy our own industry," he said. "If we import more we are going to have to close plants in Europe."

Present import quotas could not be removed overnight, he told the French Chamber of Commerce. For the time being the European car industry needed the "shelter of strong protection".

Mr Levy's speech was one of the most strongly-worded calls yet made by a European car industry leader for protection after 1992.

The European car makers association, CCMC, has already demanded that the Japanese share of the European market should not be allowed to increase until European car exports to Japan reach at least half the level of Japanese exports to Europe. Asked if all producers had backed this move, he said he had French and Italian support. "I think the British were sincere, I think some Germans were."

Europe could not simply follow the "ideals of free enterprise", he said. First the European car industry had to be rebuilt with standards in productivity, costs and work intensity that could match the Japanese and the South Koreans.

The European Community needed time to build something strong, "to prepare economic war with our competitors." Europe would soon see Japanese cars being exported from the US to Europe.

Mr Levy said European car makers should increase co-operation and collaboration in Europe. "If we remain dispersed with too many companies and too many suppliers, it could end with the loss of the economic war at the end of the period of protection."

"We must make gains in the next 5-6 years to build up our defence so as to be able to fight when the time comes with equal arms."

British Telecom sets itself tough service targets

BY DAVID THOMAS

BRITISH TELECOM yesterday released ambitious quality of service targets which it hopes it can apply to most of its customers by the early 1990s.

It also disclosed that it is pressing to be allowed greater freedom to become involved in television programme delivery.

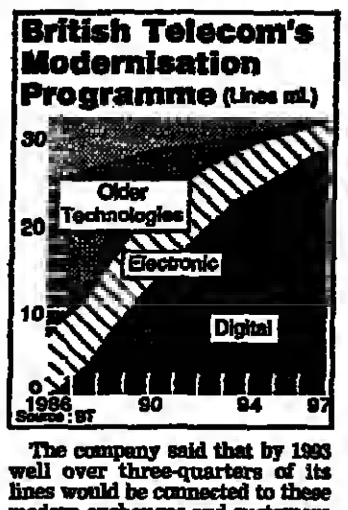
The company, which was widely criticised last year for the quality of its service, yesterday published the standards it expects from the big programme now under way aimed at modernising its network.

Mr John Tippler, director of BT's UK network, said there should be fewer than 0.05 faults a year on a line in a fully modernised network, compared with the 0.2 faults recorded by BT in September.

On a modern network, fewer than 0.5 per cent of calls should fail because of network faults, compared with 4.2 per cent in September.

The average time taken for a call to connect should be one second compared with 12 seconds in September.

BT, which released these figures in a briefing to City analysts, said the rate at which its customers could expect these standards of service would be determined by the speed at which it introduced digital exchanges or modernised its existing TXE4 electronic exchanges.



The company said that by 1993 well over three-quarters of its lines would be connected to these modern exchanges and customers using them could expect the standards of service predicted yesterday.

Dr Alan Rudge, BT's director of research and technology, said the company had told an official committee that optical fibre would be introduced into Britain's local communications network more rapidly if BT were allowed to become more involved in the delivery of television services.

Optical fibre is a modern transmission medium allowing large numbers of voice, data and image signals to be carried along the same cable.

BT close to 90% target for working call boxes

By David Thomas

BRITISH TELECOM is close to achieving its target of having 90 per cent of call boxes working by the end of this month.

The latest monthly survey carried out jointly by the company and the Office of Telecommunications, the industry's regulatory body, showed a sharp improvement in the number of boxes working.

BT and Oftel began publishing monthly surveys in the autumn, following complaints.

Of the 7,434 call boxes surveyed between February 6 and March 4, 87.2 per cent were working.

This compares with 77.5 per cent in the previous month's survey.

The results of surveys before that varied between 72 and 77 per cent.

The company, which has been devoting more resources to call boxes and reviewing procedures in the service, is confident it will meet the 90 per cent target.

Anthony Moreton writes: A study of telecommunications needs in Wales has been launched by a consortium of counties in the principality acting with the Welsh Development Agency.

More than 1,000 companies are to be surveyed and interviewed in the next three months to assess the extent to which the present services need to be updated.

David Fishlock on moves to decide whether there is any health danger from electricity

Boosting research in a current debate

IS ELECTRICITY bad for your health? There are hundreds of different electrical devices on sale claiming to use electricity and its effects to improve health and treat sickness, yet the electricity supply industry will spend £1m this year investigating possible ill-effects from its power round the home.

It has already spent about £3.5m on such research in the past 10 years, with results which at worst could be called equivocal. It now plans fresh studies using a much-improved method of measuring magnetic and electrical fields.

Electricity and magnetism are inter-related. When a coil of wire is rotated in the magnetic field between the poles of a magnet, electricity flows in it. This electricity sets up an electric field.

Such devices, known as magnetos, mounted in polished mahogany boxes and turned by a handle, were the basis of a popular electrical treatment around the turn of the century.

According to the instructions which came with one made by F. McElroy, electrician, of Manchester, when turned at the speed "most agreeable to the patient," it was good for no fewer than 50 ailments, from weak eyes to debility, want of power, fits and paralysis.

Turned slowly, this magneto produced a pleasing tingle of a few milliamperes of current. Turned faster, the current increased to the "let-go" point of beginning to hurt.

There is stronger evidence that some modern electrical devices can be efficacious. One is the defibrillator, which uses a high-voltage bolt of electricity to kick a fluttering heart back to a steady beat.

Another, which like the medical magneto has Edwardian origins, is the use of electricity to warm the tissues. Short-wave diathermy, as it is known today, uses radio waves to accelerate healing of soft-tissue injuries such as sprains.

Current interest in adverse health effects of electric and magnetic fields began a decade ago with slightly alarming Soviet reports of lethargy and loss of libido among electrical industry employees working with its new 700-kilovolt transmission system.

But research in Britain and the US failed to confirm the Soviet reports. The Russians themselves no longer stand by their original findings.

Those who live near high-voltage cables often find them intrusive and know they give off sinister sounds on a damp day. They may even experience "micro-shocks" which, although no more harmful than static electricity from a nylon carpet, can be wearisome if often repeated.

But the electricity industry can find no evidence that the high-voltage cables can cause any harm. Of necessity, people must be kept well out of range of any emanations they may produce.

Central Electricity Generating Board scientists developed a walking stick with a built-in meter and "walked the lines" to assure themselves that at ground level there was nothing detectable.

The present scientific interest focuses much nearer home — on the fields set up by cables round the house, by appliances in the kitchen and bedroom and in workplaces. The voltages here are only a few hundred volts. As Dr Robin Cox, chief medical officer of the CEGB, says: "We really have got to find out what our exposure is to magnetic fields in our everyday lives."

This is because of some findings in the US of an association between overhead but low-voltage cables of the kind which festoon the area round many American homes, and leukaemia in children.

The association is very weak; not statistically significant because numbers are too few but "suggestive," Dr Cox says.

Moreover there are serious problems in measuring the emanations, so these have merely been inferred from the arrangement of cables. Those who did the research on behalf of the New York Health Department admit their experimental controls were necessarily poor.

If an unequivocal association were to be established between domestic electricity and cancer it would have serious implications for electrical engineering as we know it today, acknowledges Dr Peter Chester, CEGB environment director.

British power distribution practice differs from the US, with UK cables buried in ways which tend to self-cancel their fields, but the industry wants to learn more about any biological effects.

The opportunity arose recently when Dr Chester's staff found a Canadian electricity company had micro-miniaturised a meter for electrical and magnetic fields, shrinking it small enough to be worn conveniently as a personal monitor. It records data for up to two weeks.

The wearers will mainly be electricity industry staff initially; secretaries and managers as well as electrical workers. In addition, the CEGB has developed a vehicle which, like the television detector vans, will be able to measure fields around homes and even inside specific rooms.

University medical statisticians will draw up questionnaires for personal details of health and wellbeing from those wearing the monitors. This time they will have the chance to correlate people's own observations with precise measurements of the emanations to which they have been exposed.

AN OFFSHORE wind turbine and three demonstration wind parks, each with 25 turbines, are to be built in a £30m programme to develop alternative sources of power.

The scheme was announced yesterday by Lord Marshall, chairman of the Central Electricity Generating Board.

A 750-kilowatt wind turbine is to be built at sea off the north Norfolk coast in a £2m project sponsored by the CEGB, Department of Energy, Eastern Electricity, turbine manufacturers and the European Community.

The South-west, west Wales and the northern Pennines will be considered at possible sites for the three wind parks, which could provide enough electricity for 15,000 people. The £28m programme is to be jointly funded by the Department of Energy and the CEGB.

Lord Marshall told a British Wind Energy Association conference that if all went well it was planned to scale up to parks with several hundred machines.

The Government and the CEGB hope that wind power will be able to provide by early next century 1,000 megawatts of economic electricity generation, an output equivalent to that of a reasonably large power station.

It is hoped the parks will be built between 1990 and 1992 and that the offshore turbine, mounted on a steel tripod and piled into the seabed 5 kilometres (3.1 miles) off the coast, will come into operation in the early 1990s.

A wind park with 30-metre-high wind turbines with blades 30 metres in diameter would occupy an area of three to four square kilometres and would have an expected operating lifetime of 25 years. Planning consent for the parks will have to be obtained.

Friends of the Earth, the environmental pressure group, welcomed the programme. "This is one of the most exciting developments in the British energy scene over recent years," it said, "and is a sure sign that renewable sources such as wind power are coming out of the laboratory and into the market place."

Liverpool gains £16m bonus from debt shift

BY IAN HAMILTON FAZEY, NORTHERN CORRESPONDENT

LIVERPOOL has balanced its budget, cut its rates and increased social service spending for 1988-89 after discovering that a creative accountancy device used during its 1985 financial crisis has accidentally entitled it to spend about £16m more on capital projects than the Government *had said it could.*

The Labour-controlled city council agreed the £303m budget yesterday. *It also agreed to work* with co-operative housing bodies and the private sector to help create a mixed housebuilding policy.

This represents a substantial political shift from the "council houses only" policy of the previous, disqualified Labour administration and will be seen by Labour nationally as a triumph over the hard Left by Mr Keva Coombes, who has Mr Neil Kinnock's support as council leader.

The 1985 device consisted of various regional bodies — such as water and transport authorities and the now-defunct Merseyside county council — *assuming* responsibility for their own debts, which Liverpool had been handling for them since 1974 as an administrative convenience.

This became inconvenient during the 1985 budget crisis because it inflated Liverpool's apparent debts to more than £700m and, as the city lost the confidence of lenders, it became harder to roll over some of its own debts as the other bodies' debts also fell due.

The effect of the regional authorities doing their own financial administration in the money markets was to reduce Liverpool's total debts by more than £100m, as well as shifting short-term liabilities to the bodies rightly responsible for them.

This in turn reduced pressure on Liverpool to meet interest *payments, thus creating a breathing* space which helped the city avoid running out of money.

No money changed hands during this complicated financial juggling act, but Labour leaders discovered last month that under government rules the debt transfers count as a capital receipt which means Liverpool can spend all of the £23m it expects from capital receipts this year instead of the £7m (30%) the Government originally assumed. It will all go on housing repairs, which are being "capitalised" — switched from the revenue budget that is met from the rates.

The council is making savings of £4m so that, in spite of spend*ing £350,000 more on social ser*vices, £500,000 on countering hardship among the worst-off schoolchildren, £40,000 on increasing the council's Youth Training Scheme intake, £70,000 on support for child care and £20,000 to the Bluecoat Arts, it is still able to cut rates by 0.5p in the pound. This is the first reduction in more than ten years.

At the same time land and asset sales of £17m are in the pipeline.

Courtaulds to add 130 jobs in Ulster clothes plants

BY ALICE RAWSTHORN

MORE THAN 130 jobs will be created in Northern Ireland as a result of a £5m investment by Courtaulds, the textile and chemicals group, in its clothing factories.

Daintifyt Foundation Wear, a subsidiary of Courtaulds Textiles, supplying lingerie to the Marks and Spencer retail group, operates from three factories in Northern Ireland with a workforce of 615 people.

It plans to buy the factory it uses in Limavady, County Londonderry from the Industrial Development Board for Northern Ireland and create 80 jobs at the plant. Daintifyt is also extending its factory in Plumbridge, Country Tyrone creating 50 jobs.

The company has secured the IDB's support to introduce computerised production and to undertake a research programme to assess its future technological needs.

Courtaulds also manufactures knitwear and jersey fabric in Northern Ireland.

The Courtaulds investment is the latest in a series of expansion schemes to be announced in the Northern Ireland textile industry. Last autumn Coats Viyella unveiled a £5m scheme for one of its spinning companies. Lismona invested £1m in its children's wear production.

The textile industry is one of the largest manufacturing sectors in Northern Ireland, employing 27,000 people, or more than a quarter of the workforce.

Jobs boost for N Wales

BY ANTHONY MORETON, WELSH CORRESPONDENT

KIMBERLY-CLARK is to spend £19m at its two plants in North Wales to expand production of women's hygiene products and industrial wipes. Yesterday's decision will lead to 190 people being added to the present workforce of 170.

The company also gave a clear hint that further spending in the area was highly likely.

The news, which will help consolidate the strong growth being experienced in this part of north-east Wales, came just two days after it was announced that Race Electronics is to expand its plant outside Cardiff taking on 1,100 workers over the next four years.

Kimberly-Clark, best known for its Kleenex tissues and Tampax hygiene products, is to spend £16m on a mill at the Delyn enterprise zone in Flint to expand production of industrial wipes, creating 110 jobs. At present, 80 people work at the plant.

At nearby Deeside, Kimberly-Clark is expanding its Sealand mill with a £3m investment to boost production of hygiene products that will add 80 jobs to the present workforce of 90.

The company said yesterday that the Welsh investment was to meet increased demand. Most of the higher output of hygiene products will be exported, largely to France. The industrial products are destined for the home market.

UK NEWS

RUC insists on presence at funerals

THE Royal Ulster Constabulary yesterday signalled the end of its low-key approach to the policing of paramilitary funerals in Northern Ireland, following five murders at recent funeral ceremonies in the province writes Michael Cassell in London.

The policy change was announced as the bodies of the two British soldiers killed in Belfast last weekend arrived back in the British mainland (pictured right), where they were met by their families and by Mrs Margaret Thatcher, the Prime Minister.

It was also confirmed yesterday that the special meeting of British and Irish ministers under the Anglo-Irish agreement will take place tomorrow in London. The meeting is being seen as a critical step in efforts to raise the level of cross-border co-operation.

Last night, after another round of talks between the RUC and the television companies, the BBC accepted legal advice and agreed to hand over 49 seconds of unbroadcast film which the police believe could help in their hunt for those involved in the attack on the two soldiers.

It is understood that the UK Government is considering extending to Northern Ireland the provisions contained within the Criminal Evidence Act which would oblige the broadcasting authorities to hand over material demanded by the police.

Yesterday's RUC statement clearly indicated that the RUC intends to resume its previously controversial policy of assuming tight and total control over IRA funerals. The decision, understood to have been personally endorsed by Sir John Hermon, the RUC chief constable, follows growing political pressure for the police to reverse their recent, stand-off approach at paramilitary funerals.

The RUC statement said the police would not tolerate future breaches of the law or the usurping of their role. It said that the police had made every reasonable attempt to avoid conflict and confrontation.

It continued :"Regrettably, experience has shown that the influence of clerics and others in the community, however well intentioned, is not enough to curb the behaviour of paramilitary organisations."

The RUC stressed that continued co-operation with the Gardai, the Irish police force, was essential to counter a terrorist threat, which it said remained great.

Cross-border security will top the agenda for tomorrow's talks in London, which will be attended by Mr Tom King, the Northern Ireland Secretary and Mr Brian Lenihan, the Irish Foreign Minister. Police chiefs from both sides of the border will also be present. There may also be an examination of continuing political difficulties between the two governments, including differences over Britain's "no prosecutions" approach to an alleged RUC shoot-to-kill policy and to the extradition of terrorist suspects from the Republic to the UK.

There is some pressure for a meeting between Mrs Thatcher and Mr Charles Haughey, the Irish Prime Minister. But it is thought more likely that the two leaders will meet in the autumn, before a review of the Anglo-Irish agreement, which reaches the end of its initial three-year period in November.

Parnes volunteers his return to the UK

BY CLIVE WOLMAN IN LONDON AND LOUISE KEHOE IN LOS ANGELES

LAWYERS representing the UK Government and Mr Antony Parnes, the former stockbroker at the centre of the Guinness affair, last night hammered out an agreement which means the abandonment of the hearing against Mr Parnes in California, scheduled to start today.

Mr Parnes signed an affidavit at the Santa Ana courthouse, where the extradition hearing was to have been held, by which he agreed to return voluntarily to the UK.

It is not yet clear whether the agreement means a dropping of some or all of the 18 charges against Mr Parnes by the UK authorities.

On Tuesday, Mr Parnes' lawyers denied any suggestion of a deal by which Mr Parnes would be granted legal immunity in return for giving evidence against the other key figures facing charges arising from their alleged involvement in the Guinness takeover battle for Distillers two years ago.

However, it is possible that some of the more serious charges, in particular those of theft, may be dropped leaving only the more technical charges arising mainly from the Companies Act outstanding against Mr Parnes.

The theft charges are the only ones on which Mr Parnes can be extradited from the US.

Mr Parnes' resistance to the moves to extradite him is thought to have been weakened after spending six months in prison awaiting the extradition hearing.

All attempts to allow him to be released on bail have been rejected by the US courts.

Mr Parnes faced the possibility of several more months, if not longer, in prison, before the extradition and appeal procedures were exhausted.

Mr Parnes was arrested when he arrived in Los Angeles from Paris on September 30 by FBI agents acting on a warrant obtained in London alleging four offences of false accounting involving £3.4m.

However, a Los Angeles court was told on October 29 that he was to be charged with a total of 18 offences, all relating to the Guinness affair, including the theft of £12.5m.

Mr Parnes' hearing was postponed for two days this week, apparently to allow a deal to be finalised.

Despite the closeness of an agreement which would end the extradition proceedings, the office of Sir Patrick Mayhew, QC, the Attorney-General, yesterday sent a letter to the editors of eight national newspapers and the Press Association, the national news agency. The letter suggested that reporting of any such hearing would have to exclude any details of the evidence or the argument.

The letter said that the Los Angeles proceedings were analogous to committal or other preliminary court hearings in British courts at which reporting restrictions are imposed.

Land Rover deal faces ballot after meeting chaos

BY RICHARD TOMKINS, MIDLANDS CORRESPONDENT

A CHAOTIC mass meeting of *Land Rover's striking production* workers broke up angrily yesterday after it became clear that a peace formula would not increase the value of the company's two-year pay offer.

The 6,000 manual workers were called to the open-air meeting to decide whether to accept the formula and return to work after a strike which has halted production for nearly five weeks.

The meeting ended in uproar *and confusion after details of the* offer had been spelt out and a show of hands failed to produce a majority on whether or not to accept the proposals.

The company is helping the unions conduct a speedy postal ballot of the workforce in the hope of achieving a conclusive result on Saturday afternoon. Meanwhile, the strike will continue.

The revised pay formula makes only small changes to the existing two-year offer. It has been achieved through juggling sums paid in basic rates, attendance allowances and bonuses without changing the total cost to the company.

Under the original offer, a grade three workers' basic pay would have risen from £145.80 a week to £156 in the first year and £166 in the second, and the attendance allowance would have risen by £1.50 for the whole period.

Part of the pay rise would have been funded by consolidating £3 worth of productivity bonuses into basic pay in the first year and another £3 worth in the second. About £2 worth of the lost bonuses would have been offset by productivity scheme improvements.

Under the revised offer, the £1.50 a week increase in attendance allowance becomes a separate allowance in the first year and will be lost only through absence, not through lateness.

Many workers at the meeting were angry after hearing rumours that the deal would produce no more money.

Their humour was not improved by the torrential rain which turned the venue, a sports ground near the plant, into a sea of mud.

Union officials told the meeting that the offer was the best they were going to get and recommended members to accept it. But the request for a show of hands was drowned in protests which left many present unsure what they were voting for.

Mr Stan Hill, Land Rover convenor, claimed the recommendation had been carried, but was howled down by protests and chants of "Ballot, ballot." He quickly gave way.

David Barchard reviews the quickening pace of change in Britain's building societies

Abbey rises on new foundations

BY DAVID BARCHARD

"IT IS THE route we must follow to meet the future needs of our members and to preserve the future strength of the Abbey National in the market place," said Sir Campbell Adamson, the society's chairman, when announcing *that the Abbey had* become the first building society to take the plunge and shed its mutual status.

The Abbey is proud of its record of being first in the building society world. In 1983 it led the way in breaking with the cartel which, until that date, had set interest rates for the societies.

Until then, the building society industry had been a sedate backwater of the financial world in which societies were expected to do only two things: they collected savings from their members and they lent money to people wanting to buy their homes.

During the 1980s the building societies have seen their secure world shaken beyond all recognition. Electronic technology has revolutionised retail financial services. The British homeowner and saver has become far more sophisticated than he was a decade ago, largely because of increased personal wealth.

Above all, the mortgage market, the traditional area in which the building societies made their money, was invaded by new players, such as the UK clearing banks, foreign banks, and latterly the mortgage corporations.

By the third quarter of last year, building societies found that their share of the mortgage market had dropped below 50 per cent. To fight back in an increasingly competitive environment, they had long been asking the government to relax the restrictions on what they could do.

The fruit of these pressures was the 1986 Building Societies *Act which freed them to diversify* into new fields such as estate agencies and unsecured personal lending and allowed them to raise a proportion of their funds from wholesale sources.

Once the major building societies had begun to proceed down this course, they rapidly found themselves moving into new products which required large scale investments to enable them to compete with the banks.

A heated war in market began as building societies wooed new customers by offering them products such as credit cards, cheque books, unit trusts, branded insurance products, personal loans, and share purchase schemes.

The larger societies quickly found that the new freedoms granted them in the 1986 Act were not sufficient to enable them to compete effectively with the banks. In January this year, the Government again relaxed restrictions on their operations by revising Schedule 8 of the 1986 Act. The ceiling for wholesale funding was raised from 20 to 40 percent. Building societies were allowed to take minority stakes in stockbrokers and unit trusts.

By then the worst pressures on the building society industry had subsided. In the wake of the October Stock Exchange Crash, savings were flooding back into the societies in record amounts. Their share of the mortgage market had crept back up towards the 60 per cent market.

*These kind of short term fluc*tuations in the market have been helpful but they have probably not affected the strategic thinking of the larger societies very much. They know that they are now large retail finance organisation in an open and increasingly competitive market.

Sir Campbell Adamson

By turning into companies with a banking licence from the Bank of England, building societies will be able to engage in activities presently closed to them. More importantly they will be able to raise equity capital.

Assets in the building society movement are heavily skewed towards larger societies. There are over 130 building societies in Britain and the three largest, the Halifax, the Abbey National, and the Nationwide Anglia, have about half the total assets, and 80 per cent is concentrated in the top ten societies.

As long ago as 1985, the Abbey's executives were saying that they would probably take the public limited company (PLC) route. Other societies have moved more slowly. The Halifax appointed N.M.Rothschild in January to advise it on incorporation, but says it is still undecided. The Nationwide Anglia says that it is not at present envisaging incorporation. Their size gives these societies a certain freedom of choice.

Smaller 'second tier' societies face a much harder set of decisions. Some may hope to continue as they are, but the chief executive of one smaller society, Mr Adnrew Longhurst of the Cheltenham and Gloucester, says that he thinks conversion is *'inevitable' although his society's* market share is too small for conversion to be feasible at this point.

These smaller societies have the obvious option of merging with other societies - although mergers in the building society world often prove debilitating. A less obvious one would be to incorporate by being absorbed into an existing company.

Several sets of negotiations with this end in mind are believed to be under way between life insurance companies, and industrial conglomerates on *one hand* and *building* societies on the other.

ILO study shows fall in strikes

BY PHILIP BASSETT, LABOUR EDITOR

THE NUMBER of strikes interna*tionally is falling, but disputes* are bigger and becoming longer, according to a study by the International Labour Organisation.

In 1986, the most recent year for which full international data are available, the ILO says that 65.3m working days were lost through strikes in 52 countries. Three quarters of the loss occurred in Canada, Finland, India, Italy and the US.

Strikes, measured by the number of working days lost, rose in Canada, the US, New Zealand, Norway, Panama, Portugal and Finland. Countries showing fewer disputes included Den*mark, Indonesia, Mexico, Sri* Lanka, Zambia and the UK.

The ILO advises against making international comparisions because of the different ways in which countries compile statistics. However, strikes based on the roughly comparable terms of days lost per 1,000 people employed shows the figure in Finland, India and New Zealand at more than 800.

Between 300 and 800 days were lost in Canada, Greece, Norway, Panama and Peru, while Egypt, Malawi, Singapore and Switzerland lost less than a day per 1,000 workers.

The number of strikes fell in 1986 from 15,500 the previous year to 14,200. But each strike involved an average of 827 workers, up from 810 in 1985, and lasted about 3.5 days compared to five the previous year.

In most of the countries, fewer than 400 workers took part in each strike, and there were fewer than four days lost on average per striking worker.

However, a few big and long strikes weighted the average. In the US, for instance, each worker in dispute lost an average of 22 working days.

Management faces testing time on route to banking

Richard Waters examines the path and pitfalls facing Abbey as it moves towards new business and financial operations

ABBEY NATIONAL'S 14 main board directors may have experience of running a building society, but they don't know much about running a bank.

Just one of them, non-executive Sir Iain Tennant, a director of Clydesdale Bank, has banking experience, according to biographies of the directors published by the society yesterday.

*This could pose one of the big*gest obstacles to the Abbey's plans for its future. Last year's Banking Act placed a new emphasis on the management skills of would-be owners of a bank. It introduced a more formal "fit and proper" test to granting banking licences, while leaving considerable discretion to the Bank of England.

The Abbey will have little problem convincing the Bank that it knows how to run its existing business. Its recent appointment of management consultants to teach branch manag*ers how to run their operations* in a more business-like manner is the latest in a succession of moves which has marked it out as the most commercially-minded of the large societies.

But building societies, which are still dominated by retail deposit taking and domestic mortgage lending, are relatively simple institutions to run. Moving into new areas of business like unsecured lending and other financial services — one of the main reasons given by the Abbey for becoming a bank — demands new skills.

*Two of the Abbey's three exec*utive directors have spent most *of their careers with the society,* while the third, chief executive Mr Peter Birch, was managing director of Gillette (UK) until 1984.

The Bank is unlikely to refuse the Abbey a banking licence on *these grounds. But it casts a care*ful eye over institutions' business plans, and has ways of influencing the pace at which banks move in their chosen direction.

One of its most powerful weapons is the ability to impose tougher capital adequacy requirements on banks if it thinks they are taking extra risks.

Capital requirements could pose a second problem for the Abbey. The ratio of capital to assets, a sign of an institution's financial strength, which is required by the Building Societies Commission is considerably less stringent than that required by the Bank of England.

At its year end, the Abbey's capital ratio stood at 3.9 per cent: to become a bank, it would have to increase this to at least 7 per cent, according to a rough calculation by Dr John Wriglesworth at Phillips and Drew. This would soak up more than half of the *£2bn that the Abbey is thought to* be able to raise in a flotation.

This stringent capital regime is due to be eased in the future. The Basle-based Bank for International Settlements last year proposed consistent captial requirements for institutions in different countries. One proposal is that domestic mortgage lending be given a risk weighting of only half that of most other banking *assets. If adopted, this would* bring the minimum capital ratio required of the Abbey bank down to roughly what it is as a building society.

But this is still some way off. The BIS plans have been published for consultation and are intended to apply by 1992. Even if the Bank of England accelerates this timetable, an early flotation for the Abbey could leave it with more onerous capital costs.

The conversion process itself is not cut and dried. The Building Societies Commission has dragged its feet on issuing the *transfer rules: it published draft* rules in December, but was unable yesterday to say when final rules would emerge.

Perhaps the most difficult stage of the transfer will be to convince the society's members to vote for the change.

Under the draft transfer regulations, at least 20 per cent of the *Abbey's 7m members must vote,* and at least three quarters of these must be in favour of the switch. Mobilising the necessary 1.05m people to vote for the change will not be the least of the Abbey's problems over the *coming months.*

Cleveland Bridge wins dockland project

BY ANDREW TAYLOR

CLEVELAND BRIDGE, part of Trafalgar House the British construction, property, shipping and hotels group, was last night believed to have won one of Europe's biggest structural steel contracts.

The contract to make and erect *the steel frame of a 50-storey* office tower on the Isle of Dogs in London's docklands is expected to be announced today by Olympia & York the Canadian property and resources group.

The tower will form the centre *piece of the £3bn Canary Wharf* office project being developed by Olympia & York.

The structural steel contract for the tower, estimated by UK *steel fabricators to be worth* around £30m will be the largest steel contract for a commercial building in Britain.

The tower will vie with an office development proposed for Frankfurt's trade fair complex for the title of Europe's tallest building. The developer of the Frankfurt project is Tishman Speyer *Properties based in New York.*

Cleveland Bridge is thought to have been the only British *bidder* for the Canary Wharf contract which British steel fabricators had expected to be awarded to Canron, a Canadian company which has worked widely with Olympia & York.

Despite strong competition and protests from US steel fabricators, Canron had previously won the main steel contracts for three out of four office blocks for Olympia & York's 8m sq ft World Financial Centre development, at *Battery Park, New York.*

Tootal Group

WINNING LEADERSHIP IN WORLD MARKETS

Tootal Group

ADDING TO OUR STRENGTHS

Tootal Group

BUILDING ON SUCCESS

1987/88 RESULTS: RECORD PROFITS

	1987/88 £'000	1986/87 £'000
Sales	503,802	408,427
Profit Before Tax	40,290	30,219
Earnings Per Ordinary Share	11.3p	10.4p
Dividends Per Ordinary Share	4.5p	4.25p

Since the early 1980s, Tootal has been transformed from a commodity textile producer to a group which generates growth by seeking out and exploiting markets where it can bring together its marketing, sourcing and distribution skills. This successful transformation is reflected in profit growth to £40.3 million in 1987/88 from £30.2 million in 1986/87.

The acquisitions of Standard-Coosa-Thatcher and Sandhurst Marketing in 1986 and the thread joint venture in China in 1987 demonstrate our strategy in action. The Group is now market leader for industrial thread in the USA and the integration of Standard-Coosa-Thatcher has transformed the profitability and returns of The American Thread Company. Sandhurst Marketing has shown strong growth and improved market penetration, particularly in stationery distribution, in its first year under our ownership. Following the success of the first joint venture in China a similar venture in thread yarn manufacture is announced today.

This investment is based upon our strategy of gaining access to quality controlled and cost-competitive sources of yarn for use in the Far East and elsewhere. Plans are well advanced for market entry into a number of countries with rapidly growing apparel industries where Tootal does not currently distribute thread.

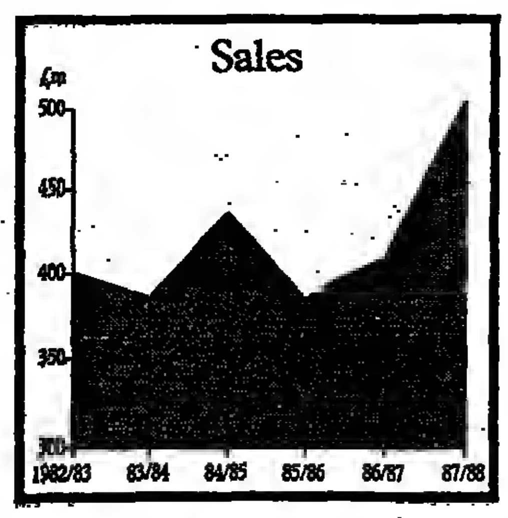
The Directors propose to raise approximately £54.2 million after expenses by way of a rights issue. Of this amount approximately £16.7 million will be used to purchase the 49.9% interest in our Specialised Materials' joint venture, Lantor International. Tootal has managed Lantor since it was established in 1956; the acquisition reflects the Board's confidence in Lantor's excellent potential for profitable growth. This will come through the development of existing products and markets, by the continued expansion into new markets and from the introduction of new products.

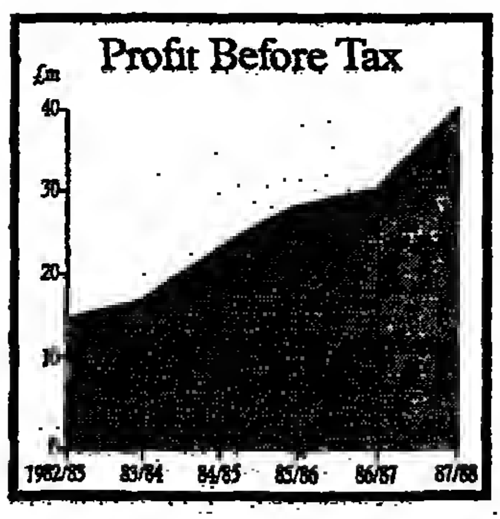
The balance has been designated for strategic investment across a number of business areas. As the reduction in gearing from 44% to 36% in 1987/88 clearly demonstrates, the existing organic investment requirements of the Group can be internally funded. Each business area in the Group has developed clear plans for growth which are at varying stages of implementation, and the rights issue will provide the Group with the resources for timely acquisitions, new product investments and expansion into new geographic markets.

Now is the time for Tootal Group to build on success by adding to our strengths.

John Craven

John Craven
Chairman
23 March 1988





Tootal Group

If you would like to know more about Tootal Group, write to: Audrey Lloyd-Kitchen, Director of Corporate Affairs, Tootal Group plc, Tootal House, 19/21 Spring Gardens, Manchester M60 2TL.

These results are extracted from the full Tootal Group accounts for the year ended 31 January 1988 which we are advised by our auditors will carry an unqualified audit report.

Policy of large-scale conifer planting continues

BY BRIDGET BLOOM

BRITAIN'S forestry policy will continue to encourage large-scale conifer plantations in Scotland and Wales. However, the planting of broadleaved trees in lowland areas is to receive official encouragement.

New forestry grants were announced yesterday, indicating a continuation of the controversial forestry policy in the wake of last week's Budget decision to abolish forestry tax incentives to the rich.

Grants for planting conifers and broadleaved trees have been raised by between 50 per cent and 75 per cent.

However, those which will apply to the large-scale planting of conifers have nearly trebled and those for large-scale broadleaved planting have doubled.

The new rates were announced by Mr Malcolm Rifkind, Secretary of State for Scotland, in a written parliamentary answer.

Sir David Montgomery, chairman of the Forestry Commission, which is responsible for the implementation of policy, said conifer planting in Scotland and Wales would be essential if the Government were to meet its target of 33,000 new hectares of forest a year.

Last week, Mr Nicholas Ridley, Environment Secretary, and Mr John MacGregor, Agriculture Minister, said the massive planting of conifers would be discouraged in England. However, Sir David said yesterday this would not apply to Scotland.

Sir David said the new forestry grants had been devised to try to replace the tax incentives abolished last week.

These allowed the cost of establishing plantations to be set against tax from other sources, while capital gains tax was avoided when the plantations were sold. Forestry will now be out of the tax system.

The old system encouraged planting in marginal areas such as the Flow Country in northern Scotland and was criticised by conservationist bodies, including government quangos such as the Nature Conservancy Council.

Mitsubishi to create 250 Scottish jobs

BY DAVID THOMAS

MITSUBISHI, the Japanese electronics group, is substantially expanding its video recorder plant in Livingston, Scotland, by adding a facility to make components.

This facility, together with increased output of the video recorders, will create 250 jobs by next year.

Mitsubishi at present employs 335 people at Livingston making video recorders and 350 making televisions at Haddington, near Edinburgh.

These two plants, which are both non-unionised, are its only European factories.

The facility, which will start with 100 jobs this summer, will make components for the recorders, including some parts such as the drum which Mitsubishi says are not made elsewhere in Britain.

The company is expanding its recorder output from 226,000 last year to 276,000 this year and more than 300,000 next. About three quarters of the machines are exported.

Mr Alan Gemmell, Mitsubishi's production manager at Livingston, said the facility would increase the amount of local content in the recorders, although they already had enough local parts to satisfy the European Commission.

Government expected to seek N Sea block bids

By Steven Butler

THE DEPARTMENT of Energy is expected today to offer about 70 blocks of acreage in the 11th licensing round for offshore oil exploration in Britain's continental shelf.

Oil companies' interest in bidding for the licence blocks has been heightened by recent large oil finds in the North Sea.

Companies have already begun forming groups to submit proposals and intense competition is expected.

Interest is likely to be highest in the mature areas of the North Sea, where improved understanding of the geology has raised hopes of further finds of commercially-exploitable oil reservoirs.

The costs of exploration and production have fallen dramatically

But exploration efforts could be affected if oil prices continue to be weak. Oil companies will be interested in flexibility in exploration proposals.

The tax regime in Britain's offshore areas is considered one of the most attractive in the world, and companies are keen to participate in an area which is seen to be politically stable.

Air traffic upgrading to cost £600m

BY MICHAEL DONNE, AEROSPACE CORRESPONDENT

THE Civil Aviation Authority plans to spend close to £600m between now and the year 2000 on improving air traffic control facilities to cope with rapidly growing air traffic.

The authority has already announced £200m of this investment for the period 1987 to 1992, but said yesterday that between a further £300m to £400m is now being planned for the period from the mid-1990s to the end of the century. The authority spent £125m on improving the facilities in the five years from 1981 to 1986.

The authority stressed that the programme had been in the planning stages for several years and was not a reaction to recent public concern about "air-misses."

Part of the investment will be directed at changing air traffic control methods to reduce the dangers of air-misses, but overall it is intended to enlarge and improve the system to cope with the current, and anticipated, rapid growth in air traffic.

Of the £200m to be spent in the next five years about £50m will be used to improve and expand the London Air Traffic Control Centre at West Drayton, near Heathrow.

Other outlays include £50m on replacing ageing radar, £22m on a new computer, and £21m on what is called a "Central Control Function."

The latter is a method of channelling inbound and outbound aircraft along separate "tunnels in the sky," each tunnel under the command of a controller with total authority over all the aircraft in that sector.

The further outlays of between £300m and £400m now planned for the mid-1990s onwards will broadly be spent in three areas, although many details have still to be settled.

The most expensive, accounting for at least £190m, will be the development of an enlarged London Air Traffic Control Centre (called LATCC II), which will be built on a new site, as yet to be determined.

Of the other two one will be the improvement of the Scottish Air Traffic Control Centre, at Prestwick, Ayrshire, which is also experiencing a big growth in traffic.

The other will be the introduction of advanced technology "microwave landing systems" to replace instrument landing systems installed at large airports. This technology will enable more aircraft to take off and land on the runways available.

Six on Iran export charges

BY ANDREW GOWERS

SIX MEN were remanded on bail at Uxbridge magistrates' court until May 18 after being charged with illegally exporting to Iran spare parts for military aircraft and for missiles.

The court appearances, which were delayed for some hours by a bomb scare, followed the arrest of 16 people on Tuesday after raids on 13 companies in London and the Home Counties. Nine of them were released on bail and one was still being interviewed last night.

The defendants are: Andrew Michael Marks, 30, director of Logic Research of Camden; William Norman Angel, 63, and his son Simon Nicholas Trent Angel, 31, respectively chairman of and salesman with Aircraft Equipment International, Ascot; Richard Cecil Patrick, 70, and Reginald Douglas Allan Johnson, managers with Dixie Bearings International of Heathrow; and Neil Broady, 42, a director of Goodman Broady, resident in Windsor.

Customs said its investigation was continuing. It is understood to involve the export of spare parts worth an estimated £20m,

The export from Britain of equipment deemed to "prolong or exacerbate" the Gulf war is banned.

Funds sold overseas holdings after crash

BY ERIC SHORT

PENSION funds sold overseas equities heavily following the stock markets' collapse, according to figures published yesterday by the WM Company.

The Edinburgh-based WM Company, now a member of The Bankers Trust Company of New York, is Britain's largest provider of performance measurement services, for domestic and globally invested portfolios. It measures the performance of nearly three-quarters of the British pension fund market.

Its pension fund service for last year provided statistics on 1,279 funds with combined assets of £135bn, including almost all the leading pension funds in Britain.

This showed that these funds sold £2.47bn of overseas equities in the final quarter of last year, having been net investors in the previous three quarters ahead of the stockmarket collapse.

This left funds at the end of the year with 14 per cent of assets in overseas equities compared with 20 per cent at the end of 1986.

Pension funds continued to be net investors in UK equities, including £1.14bn invested in the fourth quarter. However, Mr Dugald Eadie, chairman and managing director of WM Company, said this figure contained certain prior commitments on funds, including the BP issue underwriting.

The WM survey showed that the UK equity holding of funds in the survey showed a positive 7.1 per cent return over the year, despite the October market fall, although it was running et 30 per cent at the end of September.

The most successful investment sectors for pension funds last year were UK property, up 19.4 per cent, and UK bonds, up 16.4 per cent.

Overseas investment by pension funds performed poorly last year with equities down 18.5 per cent, property down 14.1 per cent and bonds down 1 per cent. However, Mr Eadie said, much of this fall came from the weakness of the US dollar. Few fund managers hedged their currency position.

Overall the top performing fund in the survey showed a positive return of 24.7 per cent.

Failed life company to pay policyholder bonus

BY ERIC SHORT

MORE THAN 50,000 policyholders who had investment contracts with London Indemnity and General Insurance, the life company, are to receive a bonus payment from the managers. It will be the first such payment since the company failed in October 1974.

The company, a member of Jessel Securities, which itself went into liquidation, was one of the first certain life companies to run into difficulties as a result of the financial crisis in 1974-75.

It was rescued by a consortium of 40 life companies and a bank. Prudential Assurance took over the management on behalf of the consortium.

The terms of the rescue involved policyholders taking a 10 per cent cut in their benefits, with the consortium guaranteeing these reduced benefits.

The terms were considered generous at the time.

The underlying investments were so mismatched with the liabilities that it was thought that the consortium would have to put up money to maintain the solvency.

In the event, the Prudential was able successfully to rearrange the portfolio so that there was no call on the consortium by members. The fund amassed a £5m surplus.

The managers intend to pass on this surplus to all policyholders.

The managers' problem is tracing those policyholders who have already received their benefits.

These policyholders will be written to at their last known address, but the managers hope that policyholders will contact the company at Dept LIGI/XS, Forbury House, 18–20 The Forbury, Reading RG1 3ES. The offer is valid for two months.

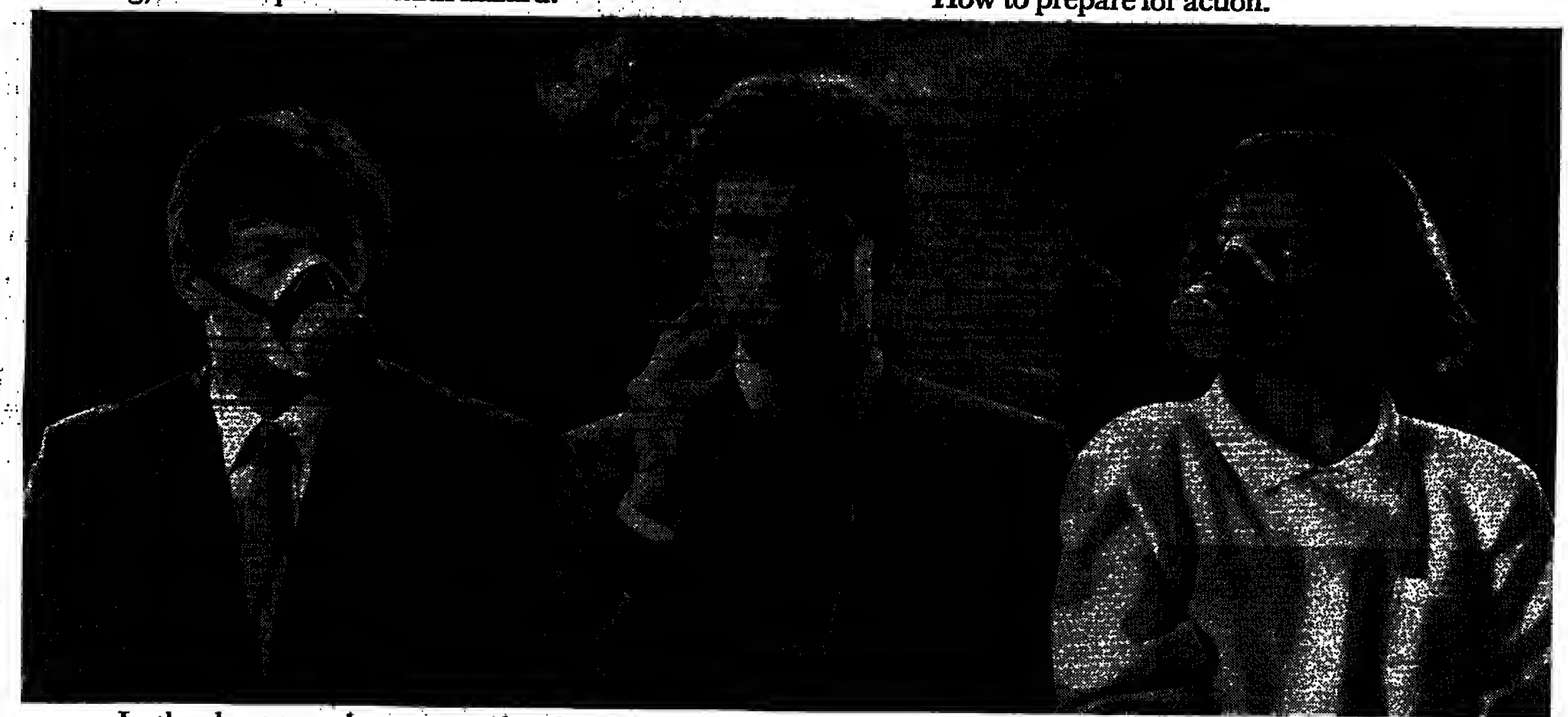
Smoking at work. Are you scared to open your mouth?

If you're a non-smoker who works with smokers, you probably suffer in silence.

Yet everybody has the right to a healthy working environment.

And an office or workshop full of nicotine, tar and carbon monoxide is hardly that.

Breathing other people's cigarette smoke (passive smoking) is now a proven health hazard.



In the short term it can cause headaches, nausea, stinging eyes and sore throats.

The long term effects are even more disturbing.

Yesterday's report by the Independent Scientific Committee on Smoking and Health has confirmed that passive smoking increases the risk of lung cancer by 10–30%.

Despite such evidence, many employers are still reluctant to introduce smoking restrictions at work.

Ironically, they think it would create an even worse atmosphere than the smoke itself.

Recent research suggests otherwise.

An NOP survey* carried out last year shows that 8 out of 10 smokers agree with the statement: "In general, people who don't smoke should have the right to work in air free of tobacco smoke."

Clearly, potential conflict between smokers and non-smokers is over-estimated.

In recent years, many companies have successfully established a smoking policy at work.

Their experiences are well worth reading.

The Health Education Authority has published a booklet called "Smoking Policies at Work."

As well as outlining several case histories, it sets out ways and means of tackling the problem.

How to prepare for action.

How to arrive at the best policy for your own workplace.

And how to implement it.

The booklet, which costs £5, can be obtained via the coupon below.

Please urge your employer to send for a copy, or failing that, send for one yourself.

Smoking at work has never been such a burning issue.

To: Supplies Dept, Health Education Authority, 78 New Oxford Street, London WC1A 1AH.

Please send me ___ copies of "Smoking Policies at Work."

Each copy costs £5. I enclose a cheque for £___ made payable to the Health Education Authority.

Name ______________________

Address ______________________

FT ______________________

HEALTH EDUCATION AUTHORITY

*NOP LONDON EVENING STANDARD, 27TH JULY 1987

MANAGEMENT: Marketing and Advertising

Much talk of cheeky friends in Brighton

Antony Thorncroft reports on this year's market research conference

THE THOUSAND plus market researchers gathered in Brighton last week for their annual conference bent their minds to a string of questions about advertising for the packaged goods industry.

"Can brands be cheeky"? asked *Mick Alt and Steve Griggs* of Creative Research. "A great ad – pity they can't remember the brand" was the title of a contribution from Roy *Langmaid* of the Research Centre and Wendy Gordon of The Research Business.

Heather Mulholland and Mark Harrison of Mulholland Research Associates attempted to define female attractiveness in advertising "the *semiotic* way". Geoff Natley of RDS and Leigh Stops of Allen Brady & Marsh examined the advertising of the Milk Marketing Board under the slogan "How much bottle has 'bottle'?". (Conclusion: while in the past the board's advertisements could feature heros who were both rebellious and anti-heroic, now they had to be heroic in their rebelliousness.)

As usual the research rarely produced clear cut answers. One survey showed that consumers had no trouble at all in wrestling with the concept of a brand being a cheeky friend. Whether they go out and buy their friends was not quite so obvious.

Among lagers, Carlsberg was more popular as a chum than *Hofmeister; among* washing powders Persil more befriended than Daz.

These results reflect the brands' respective positions in the market place – but Seven Up engendered more matey feelings than Coca Cola, which easily outsells it. As the researchers concluded "perhaps quite simply more people preferred the taste of Coca Cola."

It should worry the advertising industry more than it does that the public has almost total forgetfulness next day about the commercials they saw on TV the previous evening.

But *Langmaid* and Gordon, in their contribution, suggested that agency and advertiser need not worry too much. Under hypnosis consumers could string off the plots of commercials of brands they did oot recall when conscious. If buyers shop in a semi-trance, a brand that scores poorly in advertising recall could still be a winner. But do they?

Britain's first professor of market research, Martin Collins, of the City University Business School, examined how well research had done in the opinion polls at the 1987 General Election.

At first glance the polls read the election well. They got the result right and the 3 per cent margin of error would be perfectly acceptable as a basis for a commercial judgment. But Collins warns that this margin of error has yet to be, and perhaps can never be, eliminated, and in a closer, more confused, election, the pollsters could not guarantee such an accurate forecast.

The collective annual turnover of the hundreds of market research firms, which range in size from AGB, with its UK sales of over £83m, to the vociferous one man bands, is now fast approaching £250m, and growth in 1987 was around 17 per cent.

According to the Association of Market Survey Organisations *(Amso), which counts* as members the 32 larger research companies which account for two thirds of survey business, assignments from consumer goods manufacturers now account for 42 per cent of their research turnover, down from 51 per cent in 1981. The Unilevers and Brooke Bonds are spending as much as before, or more, but bigger budgets from other clients have fuelled the growth.

Not all of these represent fresh opportunities. The media was the source of *9* per cent of *Amso* turnover last year, as against five per cent in 1981.

The obvious new clients for research – financial, industrial, public services – did their bit, with financial institutions contributing 5 per cent of turnover, as against 2 per cent in 1981. Spending by industrial companies doubled to 4 per cent, and public services, such as British Rail, raised theirs from 2 per cent of the *Amso total to 6 per cent.* The Government, however, has halved its share of expenditure, to 4 per cent of the total.

Research is obviously riding high on the prosperity, and profitability, of British business. While companies are expansion-minded they need research to evaluate new investment opportunities.

Perhaps most encouraging for the research companies has been their success in attracting overseas business. Amso members received *£120m from abroad last* year, and for companies like AGB, overseas revenues are more important than domestic sales.

The prosperity of research companies has not gone unnoticed. Some, like Taylor Nelson and MAS, have been absorbed into the Addison Communications Group; others like Millward Brown and MIL, have been floated successfully.

The industry faces an exciting future, not least because of the change of ownership of Nielsen, traditionally second in size to AGB in the UK, though largest in the world. It has been bought by Dun & Bradstreet, which is looking for tremendous growth, mainly through acquisition. Nielsen has already bought three small companies in the UK and could well diversify outside its traditional retail audit dominance. It will be a competitor for the television audience measurement contract when it comes up *for renewal next year.*

Prosperity has given researchers more confidence; they want to develop into consultants, to be appreciated for their skill in interpreting and applying the facts they unearth.

Busy women need less hassle

David Churchill on the implications for marketeers of changing roles in society

THE NUMBER of British women entering the professions has doubled since the beginning of this decade; as many women as men are now being articled to solicitors or entering medical school.

Indeed, the role of women in today's society continues to change rapidly, and although stereotypical images are being seen less frequently, there are still some advertisers and marketeers who need to take a sharply different approach when trying to woo the female purse.

This view is underlined by the findings of a study – Women 2000 – published today by the Mintel market research company. In all areas of life, says the study, the role of women is in flux:

● Marriage: Women appear less satisfied with the quality of their relationships than are men and are increasingly prepared to dispense with an unsatisfactory partnership. More than two-thirds of all divorce petitions, Mintel points out, are filed by women. Only 8 per cent of men fulfil the traditional role of breadwinner with a dependent wife and two children.

"There is an emphasis for women on independence and freedom, an *emphasis* which is common to both married and single women, mothers and the childless, and has implications for the way household and personal discretionary income will be spent," says Mintel.

● Work: This attitude to independence within relationships is fuelled by the increasing number of women who are economically active, Mintel points out.

"More than half of all married women work and women no longer see child-rearing as signalling the end of their working lives, but as an interruption to it," the report says.

Women, Mintel adds, contribute substantially to the household budget and are very definitely working in order to do so rather than for pin money. The report points out that the changing role of women has been greater for some than others, notably the growing number of professional women now competing with men for jobs and promotion in areas that were once entirely male-dominated.

"Manufacturers will need to target products more closely to specific groups of women at all stages of the marketing process, including new *product* development."

It adds: "Given that women have quite decided ideas about what they would like to do with their time and money, they should be considered an influential group by advertisers outside of tha fast-moving-consumer-goods sector."

But, Mintel warns, "while this does present dangers for those whose business depends on successful communication with women, there are also very real new opportunities to be exploited."

Women, for example, are taking increasing advantaga of financial services; just over half of all women now have their own bank account.

Mintel believes that the increasingly busy oature of women's lives will place an even greater premium *on convenience* than at present.

This will therefore give greater emphasis to superstore or one-stop shopping developments – and will consequently encourage the increased penetration of own brands in many *product areas.*

● Shopping: Women, according to the report, also regard shopping for goods other than necessities as a leisure pursuit. The implication of this, says Mintel, should be considered by retailers; shopping *environments should* minimise hassles soch as poor parking and long walks between shops and maximise the leisure and relaxation aspects.

Advertisers also should be aware of the need, says Mintel, to *"reflect the multiplicity of roles* women now play."

Womeo appear unimpressed with advertisemeots showing supposedly glamorous or sexy women, according to the Mintel researchers. "The women that women themselves admire are those that are capable, able to laugh at themselves, and who appear warm and approachable."

Thus research revealed that the actress Felicity Keodall was much admired, while Joan Collins and Margaret Thatcher were less popular. *Model Samatha Fox,* not surprisingly, is seen by women as a very unattractive role model.

* *Women 2,000; Mintel, KAE House, 7 Arundel Street, London, WC2. Price £550.*

Design: 50 per cent increase in income

Feona McEwan reports on one of the healthiest sectors of the UK economy

BRITAIN's design industry is booming and that's official. Figures published yesterday by DesignWeek, the 18-month-old trade paper for what is still a young industry, indicate that it is one of the healthiest sectors of the British economy.

The 100 largest design companies in the UK report a rise in fee income of 50 per cent to total £300m in the past 12 months, with a further 30 to 40 per cent increase expected in the coming year.

Figures also show that the number of designers employed has risen by 37 per cent, during the same period, to nearly 6,000.

Traditionally, the design industry has had a fragmented image based on a myriad tight-lipped companies which were less than keen on revealing vital company statistics to their rivals.

But as recognition of the value of design as a business catalyst has spread, so the willingness by its practitioners to stand up and be counted, has grown.

DesignWeek's full table encompasses 275 firms, and is based on the latest available unaudited figures supplied by mostly private companies or partnerships.

Notable by their absence in the top 20 table – specially prepard for the FT – is Landor, the US-owned corporate and brand identity specialists responsible for the British Airways revamp, and YSM Partnership, the multi-disciplinary architecture practice behind the new north terminal at Gatwick.

Both declined to supply fee income figures.

One of the most interesting points to emerge from the table, says Jeremy Myerson, editor of DesignWeek, is the fight going on for dominance of the design community.

At the top are giant multi-disciplinary groups like Building Design Partnership (which is working on the Channel Tunnel) and Martin Sorrell's sprawling WPP Group. (Figures for WPP in the table alongside cover design companies only, including McColl, the retail specialist, and Business Design Group, the office planners.)

These are under pressure from core design purists on the one hand – like Michael Peters, Wolff Olins and Fitch – and on the other by architectural practices newly moved into design such as Percy Thomas Partnership, The Company of Designers and DEGW.

Increasingly, architecture is being regarded as a larger part of the design consulting equation. "There is a view among core design businesses that the only way to be at the top is to have architectural weight," says Myerson. Michael Peters and Fitch have underlined this with recent acquisitions of architectural practices.

He notes, too, that there is no one consultancy close to dominating the industry, as in, say, advertising circles. "Even the market leaders only have a small percentage of the market each," says Myerson.

THE UK's TOP 20 DESIGN CONSULTANCIES

Design Group	1986-87 Design Fee income £m	1986-87 Overall Turnover £m	Year Established	Number of staff	Range of disciplines offered
1 Building Design Partnership	36.00	36.00	1961	1310	ABCDEFG
2 WPP Group	32.10	50.20	1970	741	ABCDEFG
3 Michael Peters Group	19.79	25.12	1970	500	ABCDEF
4 Addison Consultancy Group	12.74	20.22	1986	319	ABCDE
5 Fitch & Company	10.20	10.20	1973	370	ABCDEF
6 Cambridge Consultants	8.50	9.50	1960	250	ACG
7 Holmes & Marchant Group	7.61	14.37	1967	198	ABCDF
8 Percy Thomas Partnership	6.79	7.91	1912	249	ABEG
9 Conran Design Group	6.10	6.30	1956	200	ABCDEG
10 The Company of Designers	6.04	6.04	1968	279	ABDEFG
11 Imagination	6.00	19.00	1978	151	ABCDEFG
12 Wolff Olins	4.70	7.50	1965	130	ABD
13 Design in Action	4.40	5.50	1984	98	ABCFG
14 Minale Tattersfield and Partners	3.15	3.15	1964	40	ABCDG
15 DGI International	3.00	40.00	1969	120	ABDEG
16 DEGW	3.00	3.70	1971	120	ABCEG
17 David Davies Associates	2.98	2.98	1982	80	ABCDEFG
18 Coley Porter Bell	2.30	2.30	1979	52	AD
19 Crighton	2.09	2.61	1984	80	ABDEFG
20 Saunders Design	2.00	2.30	1979	50	ABDEF

KEY A = graphics/packaging/corporate identity; B = interiors; C = product; D = retail; E = architecture; F = exhibitions; G = other, eg fashion, engineering, market research

CREDIT: DesignWeek

BUSINESS LAW

PLO's dilemma in US courts

By A.H. Hermann, Legal Correspondent

THE US Administration has lost no time: simultaneously with the coming into effect of the Antiterrorism Act 1987, it applied on Tuesday to a New York court for *an order* requiring the Palestine Liberation Organisation (PLO) to vacate its building at 115 East 65th Street – a desirable Manhattan address where it maintains its permanent Observer Mission to the United Nations. The court has also been asked to prohibit the PLO from either receiving or distributing funds in the US.

The PLO will have 20 days to submit its defence. The administration could probably ask for, and obtain, an interlocutory injunction for the immediate *closing down of the PLO office* but is under pressure from the UN not to do so. The UN are seeking support from the International Court of Justice in the Hague. On the other hand, the US case may may be fortified by legal arguments derived from a private damages action brought against the PLO by the family of Mr Leon Klinghoffer, murdered by the hijackers of the Achille Lauro.

Let us take the UN/US dispute first. The State Department made *it clear* to the *Secretary General* of the UN that the powers it received under the Antiterrorism Act would be used to close down the *office* of the *PLO* permanent Observer Mission to the UN. The UN Secretariat and General Assembly opposed this move and proposed arbitration which the US rejected.

The General Assembly of the UN responded to this by adopting two resolutions. One asks the International Court of Justice to say, in an advisory opinion, whether the present dispute over the PLO mission falls under Article 21 of the UN-US Headquarters Agreement which requires that *all disputes about* the *interpretation* of the agreement should be referred for final decision to a tribunal of three arbitrators. The other resolution calls on the US not to take any action which would upset the present arrangements *for the PLO mission.*

The Court, sitting without much to do in the Peace Place, a questionable gem of Victorian architecture in the Hague, promptly asked the UN and the US, as well as any other interested member States, to submit their papers by tomorrow (March 25) and fixed the hearings for April 11.

It seems most probable that the Court will say that the US is obliged to submit to arbitration – but there is, of course, no way of forcing the US to abide by the Courts opinion. The US court, asked for the eviction order, will have no difficulty in placing the Antiterrorism Act above the requirements of international law. However, even the position under international law is uncertain.

The questions of PLO status and its immunity have been occupying US courts for about two years, in connection with the claim of compensation for the murder of Mr Klinghoffer, a cruise passenger confined to a wheelchair, whom the hijackers of the Achille Lauro shot and threw overboard. The valuable Manhattan property owned and occupied by the PLO provided the starting point for an action brought by Klinghoffer's family and now pending before the New York Supreme Court *(Klinghoffer v PLO, 27801/85).*

Questions of the PLO's status and immunity have been occupying US courts for two years in connection with the claim for compensation for the murder of Mr Klinghoffer, a cruise passenger confined to a wheelchair, whom the hijackers of the Achille Lauro shot and threw overboard

To win in the dispute with the US over the threatened expulsion from its UN mission, the *PLO* will have to argue that it is the government of a nation or at least a coherent quasi-governmental organisation, capable of preventing the use of its New York office for terrorist activities.

However, in resisting the claims of the Klinghoffer family the PLO has been denying for over two years that it is in any way similar to a nation state with government capable of taking responsibility for the activities of its members. The two legal disputes illuminate the contradictory aspirations of the PLO – and at the same time demonstrate a new trend in the extraterritorial application of national laws.

Should it come to UN/US arbitration the UN would, no doubt, claim that its independent functioning would be impossible if the US could expel missions of organisations admitted to UN membership or observer status. The US are likely to claim that the PLO is not an organisation capable either of membership or observer status, because of its lack of organisational coherence and *effective control over* its component factions engaged in activities contrary to tha UN Charter and proscribed by international conventions.

The arguments on the second issue have been rehearsed in the course of the Klinghoffer litigation. Giving evidence, Mr Labib Terzi, the head of the PLO mission to the UN, stated that the PLO was the visible body of the Palestinian people; every Palestinian was assumed to a member of the PLO; it was neither a *government* nor a *club,* but a *nation.*

The PLO National Council, which Mr Terzi described as a sort of parliament, consisted of representatives of military as *well as civilian* groups. *It* met for the last time in November 1984. The ruling body of the PLO was the 16-men Executive Committee chaired by *Mr Arafat.*

Mr Abul Abbas, the head of the Palestine Liberation Front, a "unanimously elected" member of the Executive Committee, admitted in a television interview broadcast in the US that he organised the hijacking of the Achille Lauro. And he remained a member of the Executive Committee. The hijackers were PLO-trained and, according to their proclamation, delivered with a hail of bullets, took control of the ship on behalf of the PLO. Confronted with these facts, Mr Terzi denied in his testimony that the PLO can be made responsible.

This seems to create a difficulty for whoever will be pleading the UN case against the US over the PLO mission. Without accepting responsibility for the hijacking organised by a member of the PLO's Executive Committee it will be impossible to present the PLO as a coherent organisation capable of keeping its UN mission out of mischief. Indeed, Mr Yasser Arafat's manifest disapproval of the hijack and his role in its termination would suggest that Mr Terzi was speaking the truth, and that the *PLO is a* pluralist movement without effective central control. And, as the US could then argue unfit for the observer *status* with the UN.

The Klinghoffer litigation also produced a oumber of other legal issues. One concerned the question of whether the PLO mission, and the now closed PLO information office in Washington, were "doing business in the US", *thus* providing ground for the New York court's personal jurisdiction over them.

In this connection it should be noted that the US Court of Appeals for the Second Circuit has recently accepted US jurisdiction over a Liberian shipping company's claim of damages for the bombing on the high seas of their oil tanker by the Argentinian air force during the Falklands war – and rejected Argentina's plaa of sovereign immunity.

This goes even further than the assumption of jurisdiction based solely on the nationality of the *victim when the* wrong was done outside of jurisdiction by a foreign national. Such "passive jurisdiction" was not recognised in the US until 1984 when it was allowed, by the Comprehensive Crime Control Act, for criminal prosecutions of hostage taking and terrorism. This concept was extended to civil litigation by the New York District Court when it allowed the owners of Achilla Lauro to be sued by the Klinghoffer family in the US.

If anyone feels that the *assumption of such* a, literally, far-reaching jurisdiction is rather extraordinary, he should look up the recent High Court judgment in *Holmes v Bangladesh Biman Corporation* (FT Law Reports, March 9 1988) when the Court of Appeal held that UK courts had jurisdiction over a dispute in which the claimant was a UK national and resident, the defendant the Bangledesh Air Line, and the disputed wrong giving rise to the airline's liability an accident on a domestic flight in Bangladesh. One of the appeal judges even said, though *obiter,* that UK courts would have jurisdiction even if the victim of the accident was a Bangladeshi national and resident.

Can extraterritorial jurisdiction – better known as the long arm of the court – go further than that?

The Royal Academy/David Piper

Happy hedonism

The display in the Fine Rooms at the Royal Academy (until June 12) is of the third loan of substance from the Thyssen-Bornemisza collections, based at the Villa Favorita at Lugano, to be shown in London. Not many under the age of forty are likely to remember the first, of Old Masters, staged at the National Gallery in 1961, but the vibrant explosion at the Academy of modern works collected by the present owner, in 1984, is still very memorable. This loan brings back some items seen in 1961, but also emphasises the quality of acquisition sustained by the present Baron since the death in 1947 of his father, founder of the collection. Twenty of the fifty-two paintings shown have been bought since then.

The first room, with the small early portraits may be for many the most memorable, with central in it that famous double-sided Memling, featuring one of the artist's most poetic young men in adoration on one side, and on the other one of the most astonishing still-lifes in early Netherlandish painting: three flowers, lily, iris and columbine, associated with the Virgin Mary, who must have presided on a companion panel, hinged to form a diptych, but now lost. The portraits here have in common their almost miniature scale and a sharp vivid clarity as if of essences distilled, whether by Northerners, or Italians, such as Antonello da Messina or Solario, Baldung Grien or Altdorfer (rather larger, a most rare and delightful masterpiece).

And here too, visiting London, is our Henry VIII, the only painting of him universally accepted as from Holbein's own hand to have survived immaculate: small, and just the head – turned slightly to one side – and the richly costumed chest, but so dense in presence as to convey enormousness, even enormity. "If all the Pictures and Patterns of a merciless Prince were lost in the World," observed Sir Walter Raleigh, "they might all again be painted to the Life out of the Story of this King." He probably had the monumental straddling swagger of the whole length of Henry that appeared in the now-lost wall-painting in the Privy Chamber at Whitehall in mind; in that, Henry was shown even more aggressively, full-face. However, Carlyle thought otherwise, concluding that, when looking into "that broad yeoman face and those brave blue eyes of his, as they are seen in the Holbein portrait," he must believe "an honest soul resided within his sturdy body." Ah well; Holbein recorded his eyes as a rather chill slate-grey.

In the next room the exhibition continues with superb paintings of the early Renaissance: Duccio (one of the very few pieces that got detached from the great *Maesta* in Siena); Durer; an exquisite Petrus Christus of the Madonna framed within the stark branches of a dry thorn tree, which is spangled as if for Christmas with pendant capital As – for Ave Maria, though the thorn tree mandorla evokes inescapable anticipations of the Crown of Thorns. Sebastiano del Piombo offers a grandee of compelling luxury of well-being and material affluence, dictating to his servile secretary (a painting long ascribed to Raphael); and, as if opening up towards the Baroque, a great Palma Vecchio, "La Bella," a blonde of comparably feminine luxury, marmoreal shoulders in the most succulent swathes of red and blue silks. In remorseless contrast, two Annunciations ascribed to El Greco – one quintessentially El Greco, a spiritual flame of pinks and greens leaping upwards. And then, an image that has remained with me ever since I saw it first in 1961, the Risen Christ by that rare and most extraordinary painter Bramantino: a torso erect in life but wearing still the rigor chill of death.

The other large room is mainly seventeenth century, celebrating above all Caravaggio and his resonance through Europe in the painting of such as Valentin de Bourgogne, Mattia Preti, Hendrik ter Bruggen. The Caravaggio (St Catherine with her wheel) and the Valentin were relatively precocious acquisitions (in terms of the taste of the time) in the 1930s; the other two are recent forays in a taste now become fashionable. Violence, if not overt, lurks nevertheless. In Michiel Sweerts' "Sense of Smell," echoes of Caravaggio (in the sitter's somewhat ambiguous sexuality) and even of Vermeer (in its calm lucidity) harmonise in a most mysterious enticement.

There is a very vigorous Fisherman playing the Violin (left-handed), also very difficult to reconcile with what one knows of Hals, though undoubtedly spirited: a grand lady of high court fashion, fairly early Rubens; a superbly relaxed yet pensive Van Dyck, Jacques le Roy; a Pieter de Hooch recording on a quite uncharacteristic grand scale the grand Council Chamber of Amsterdam, in which the figures stand motionless, disposed as if chessmen upon the geometric patterning of the floor, awaiting the next move.

The odd little space known as the "Tondo Annexe," because it houses the Academy's most precious possession, Michelangelo's sculptured tondo, that wonderful celebration of the virgin and Child, has been in truth annexed to the exhibition. The Tondo is hung around with relatively small paintings from Thyssen, almost all recent acquisitions, from the Dutch seventeenth century and the French and Italian eighteenth. Here are the two Watteaus, each with its characteristic elegant vitality and elegance shadowed by sadness (and a provocative little Boucher absolutely unshadowed by any hint of melancholy). Of the two Goyas, one (an acquisition of the first baron) is the agonised mirthless grimace of the old beggar, one of the horrific "Black pintings" that Goya created in his reclusive old age. Nevertheless, the general atmospherics of the room are hedonistic: here be happiness.

Personally, the painting I would take home, given the chance, is Saenredam's hallucinatory inventory of the façade of St Mary's, Utrecht. Another architectural piece is Canaletto's: one of the set of Warwick Castle views that he painted in England around 1752, and which were dispersed a decade ago. An English visitor may indeed remember with a nervous pang the arduous appeal campaign fought by Birmingham to secure two of that set from export. The very presence of the Michelangelo in this context (oddly it does not seem at all incongruous – quality will tell) may cause a pang. The Tondo, of course, does not belong to Thyssen; it is the Academy's own treasure, bequeathed to it by Sir George Beaumont, no less, the great benefactor who is even now being celebrated by a show of his founding benefaction to the National Gallery. But a further pang may remind us that not all that long ago the Academy, in acute financial straits, caused the National to mount an appeal even more agonised that that of Birmingham to secure the Leonardo cartoon from export. That cartoon too was a cherished treasure of the Academy and financial crises are endemic at Burlington House; if the options are to sell or to close, what then?

"Portrait of a Lady" by Hans Baldung, called Grien

Let us cross ourselves, and move on. Present speculation is rather as to how the Baron will decide to ensure the continuation of the Thyssen Collections, or parts of them, as entity or entities, for posterity. Not that he has stoped buying, far from it; I suspect the popular image of his as a rather jovial but sensitive buccaneer, one eye glad, one eye sad, is not inaccurate, but he is a predator – as of course were the British collectors of yore in our affluent prime. The prime consideration though at the moment is said to be the future. Jockeying for position is already rife – in Switzerland, in Spain, in Germany, in America. Even in Britain the Minister for the Arts has indicated that should a possibility emerge of the collections coming to Britain, the Government would consider it very seriously. That is more or less the temperature of enthusiasm which, according to some, was responsible for the fabled Gulbenkian collection (now handsomely housed in Lisbon) not coming to Britain: negotiations, or the lack of, chronicled with vivid relish in Kenneth Clark's autobiography.

Meanwhile, Baron Thyssen certainly has matter in his grasp with which to create a most enticing rattle as he shakes out the terms of his will. The collection has after all been described as the most important surviving in private possession (other than the Queen's). It is an enviable position, and a responsible one, though the Baron is not above enlightening the problem with glee, as when he dug interested persons behind the Iron Curtain in the ribs with the suggestion that they do a swap: he gives them the Thyssen collections, they dismantle the Berlin Wall.

In the short term, for three months, London and its visitors have a bonus of very delectable pleasure made available, courtesy of the sponsors (The Times), the Royal Academy, and of course, Baron Thyssen himself. The catalogue, by David Ekserdjian (£10.50) may disappoint specialists, lacking all their beloved "apparatus" (provenances, bibliography, detailed discussion of attributions, condition, cleaning policy, etc.), but will delight the "ordinary visitor," reproducing everything in colour, and with a commentary that is informed with learning yet fresh, even witty, and (as does not happen all that often) actually tells you (are you accurately aware of what Omphale did to Hercules?) who the characters in the pictures are and what they are up to.

Der fliegender Höllander/Milan

Max Loppert

On Tuesday Riccardo Muti conducted his first Wagner opera. There have been whispers of dissatisfaction among the opera-loving Milanese over the current Scala season (they have been bewailing various vocal disappointments as well as an unbalanced repertory), but this new *Dutchman* will certainly give a lift to both the house and its patrons. (The work itself has not been heard here for 22 years.)

In spite of a spectacular production, which shrewdly exploits the scale of this great theatre, and in spite of one first-rate piece of casting, one's greatest interest is directed toward the orchestra pit. Musically, this was a thrilling performance: work and theatre came together with a rare unification of purpose. Muti's insistent dramatic sense, and his determination to draw clean, clear, perfectly balanced lines from all the operas he conducts, kept Wagner's opera moving urgently forward: this was an account of it entirely without dull or square patches, one that was "heard" and focussed along every line.

The shaping hand and its illuminating touch were registered in unobtrusive passages – bass-line string tremolos supporting a singing voice, the addition of a single woodwind colour or timbre – quite as much as in the celebrated moments of wind-and-wave turbulence. In the best way, a leading Italian conductor and the finest of Italian orchestras remind one how much of the score is regularly passed over or taken for granted in readings of supposedly more authentic stamp.

What is still missing, at this early stage in Muti's Wagnerian approaches, is a due command of Wagnerian spaciousness, and also the feeling of cosiness, domestic or local, that forms an important part of the work's unfailingly exhilarating atmospheric contrasts. (The Act 3 sailor jollifications lost their bounce by being taken just a fraction too *moderato* and with too even a weight of accent.) But no doubt of it: this marks an auspicious chapter-opening in Muti's operatic career.

I had not previously heard James Morris in any of his Wagner bass-baritone roles. (London was denied his Dutchman by the cancellation of the recently scheduled Royal Opera revival). Having now done so, I can join in the international chorus of acclaim. Mr Morris's grandly phrased, warmly coloured singing of Vanderdecken has both the necessary power and the no-less-necessary wieldiness of tone. He comes as near to the Wagner *Heldenbariton* ideal as our poverty-stricken age is likely to go: hearing him, one recalls too many other Dutchmans of the last two decades, even the worthiest ones, who struggled and strained just where he sings within his means. Mr Morris is an imposing but not electrifying actor, who uses words intelligently but not with that extra pressure of detail they often require. With his voice he bestrides the role, the opera, the stage.

No-one else reaches this level, bnt Robert Lloyd's canny, quick-witted Daland gains an extra degree of authority and force from the helpful Scala acoustics, and Eberhard Büchner's Erik uses an agreeable but unremarkable tenor with considerable skill to make the part seem less drearily unrewarding than usual. The chorus sings magnificently, in very peculiar German. The weak link is the Senta of the American soprano Deborah Polaski: serious and musicianly, but apt to produce discoloured or effortfully strident phrases under pressure, of which there is unfortunately a fair amount in this ur-Brünnhilde role. She is the announced heroine of this year's new Bayreuth *Ring*, to which I now look forward with a certain nervousness.

Michael Hampe (producer) and John Gunter (designer) have collaborated on a staging which employs modern technology to renew the traditional approach to this recently much-reappraised Wagner opera. A blending of poetically naturalistic setting (the wooden, balconied spinning room lit like a Vermeer) and picturesque fancy (the huge red-sailed ghost ship rising up out of a Turner sea and sky) creates an impressively well-plotted Scala spectacle – except in Act 3, which seems oddly cramped and hang-fire.

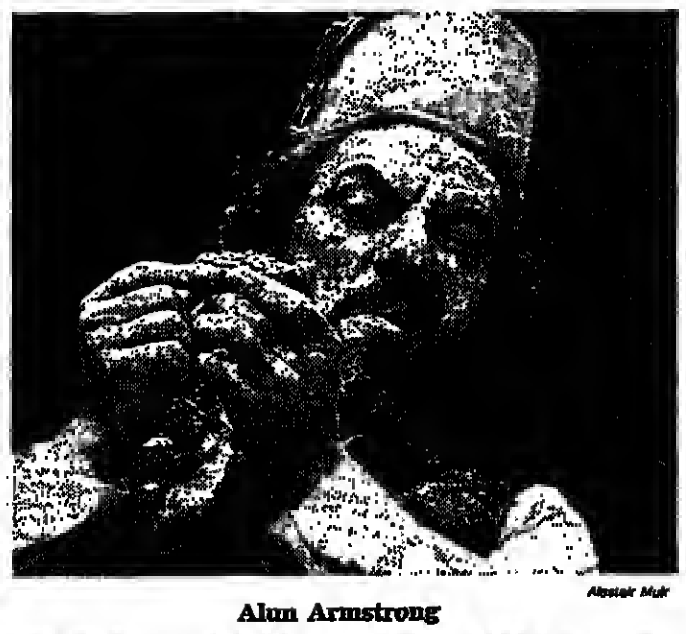
Judged alongside the various "interventionist" productions of this opera that one has seen, Hampe's disgorges no specially stimulating slants or insights; and none of the characters emerges in any newly sharpened clarity. Its chief effect is to throw the weight of "meaning-articulation" squarely back onto the music and its executants. In this case, we remember what a very considerable virtue that can be.

The Jew of Malta/Barbican

Michael Coveney

After the grim pictures from Bethlehem, the West Bank and West Belfast in the newspapers and on television over the past week or so, it is good at least to have barbarous atrocity back where it belongs: on the stage. Marlowe's invigorating Machiavellian farcical tragedy follows *Cymbeline* in opening the RSC London season in the Barbican, a transfer from last summer's Swan repertoire in Stratford-upon-Avon.

Mind you, Barry Kyle's production, coarse and occasionally messy, goes out of its way to relocate Marlowe's bustling Malta in our contemporary imagery of a political hotspot. The invading Turks are led by a dead ringer for Yasser Arafat (Peter Polycarpou) and wield sub-machine guns. The under-employed courtesan Bellamira (Stella Gonet) stalks her prey with a ghetto-blaster, and Alun Armstrong as Barabas gleans what must be a new post-Budget ironical laugh on "For who is now but honoured for his wealth?"



Alastair Muir

Alun Armstrong

The play opens with the economically hard-pressed Maltese exacting punitive tribute from the Jewish minority and ends with savage executions as the Christians, in league with Spain, double-cross their conquerors. On the way, there are casual sectarian murders and, to borrow current Parliamentary parlance, various other intolerable outrages such as the strangling of a Friar in his bed and the wholesale poisoning of a nunnery.

T S Eliot was surely right in stating that the play is both a farce and terribly serious. Any sense of anti-Semitism is completely engulfed in seeing Barabas as talented immoralist in a wholly corrupt political and economic environment.

The element missing from Alun Armstrong's otherwise energetic and irresistible performance is one of lyricism. This long role, which has almost half the text of 2,400 lines, is one of both activist and Marlovian over-reacher. But he is also an experienced man of the world who learned how to foster revenge in the Florentine ghetto and has undergone lengthy apprenticeships in necromancy, engineering and usury.

Armstrong hurtles along without pausing to be sinister, or even wily. In this, he is the exact opposite of Eric Porter's Barabas in the middle 1960s, eschewing the Faustian intimations in favour of the jesting japery. His most brilliant "turn" is as the murderous French singer in the brothel, a Gallic George Formby in a straw boater who brings the house down and must surely be allowed an encore by Mr Kyle.

That earlier RSC revival was unforgettably set by Farrah in a Malta of white, sun-baked walls. Bob Crowley's packing case construction hardly suggests "infinite riches in a little room" but admirably conveys the central notion of Barabas, initially wrapped in a geographical cloak, as a powerful representative of the Mediterranean trading industry. He is also splendidly hoist with his own cruciform petard at the end.

Much of the acting is sloppy, in tune with a lazily compiled soundtrack by Ilona Sekacz, of all people – bits of Glass, Bach, and "Jerusalem" come and go with the same wilfulness as the mixed-historical costume accessories. The RSC "hotch-potch" style, of which Mr Kyle is something of a purveyor, is looking awfully dated.

John Carlisle is a hawkish, superior Governor, George Raistrick and Geoffrey Freshwater amusingly lubricious Friars. But the evening's strength lies in the performance rapport between Mr Armstrong and his cringing slave Ithamore, superbly played by Phil Daniels as an embryonic Caliban growing up fast on the lessons of his master criminal.

La Sylphide/Sadler's Wells

Clement Crisp

It was an important occasion for London City Ballet on Tuesday night: the opening of a first London season, in the presence of the company's patron, the Princess of Wales. It was a happy occasion, too, the culmination of ten years unsubsidised work that has seen the troupe grow steadily in stature and attainment, maintaining the while an independent and optimistic spirit about the nature of its performances and its identity.

Wisely, the company began this short Wells visit with its strongest repertory card: Solveig Ostergaard's staging of *La Sylphide*. I reported last autumn upon this prodnction when it was shown in Bromley, admiring then, as I admire now, its excellently judged scale for LCB's modest forces. We tend today to inflate certain ballets of the Bournonville repertory far beyond the domestic proportions that obtained at their first performance. Seen on the Wells stage, with a cast reduced to essential numbers, the innate poetry of Bournonville's vision speaks strongly to us. We sense a certain innocence of means, a directness and almost a naivete of feeling, that would not have seemed alien to Bournonville, and which now give the drama its theatrical vitality. With LCB'a artists we can believe once again that a sylph might lure a mortal man into a high Romantic infatuation, and that evil, in the character of the witch Madge, might ultimately triumph.

In this communicative directness lies the particular merit of Mme Ostergaard's version and of the company performance. Leading the cast on Tuesday, Marian St. Claire showed herself mistress of all the pretty ways and beseeching glances of the sylph. Her James was Tim Almaas, very elegant in style, though I would have wished for more ardour as he awakens to the sylph's entreaties. The Madge was Harold King, in a reading whose grotesque appearance is matched by a no less grotesque energy. From the supporting cast, nimble steps in the reels, sweet decorum in the second act evolutions, and whole-hearted playing.

To close the evening, the exoticism and eroticism of Jack Carter'a *Three Dances to Japanese Music*. This is a gloss upon ideas from Kabuki and other forms of popular Japanese theatre, which moves from costume display to a physical crescendo in which the women may well feel that they have learned a different meaning to the word "manhandled." It combines the quaint and the blatant in an acutely effective way, and its postures and gymnastics are done with entire conviction by London City Ballet's artists.

I record with admiration that LCB relies for much of its support upon commercial sponsorship, and with gratitude that *La Sylphide* and Tuesday's gala were made possible by ADT.

Publishing lecture

Nigel Newton, chairman of Bloomsbury, will be giving a lecture at the Royal Society of Arts (8 John Adam Street, WC2) on *Starting a Publishing House* at 6 p.m. on Wednesday, June 15.

Tickets from Katharine Dark at the RSA.

Dmitry Alexeyev/Elizabeth Hall

Andrew Clements

The vicissitudes of Alexeyev's career have been most thoroughly monitored on this page for more than a decade. The unevenness of his development has been as frustrating as it has been fascinating, and perhaps accounts for the relatively small following he has accrued in London. Tuesday was, thankfully, one of those occasions on which he played up to his full potential, in music – by Brahms, Beethoven and Schumann – that suits him exactly. On this form he is one of the most searching and satisfying interpreters of his generation.

He did not slot into that groove immediately. The first of Brahms' Op.79 Rhapsodies lacked clear motivation, meandered in its central section and began to cohere only in its reprise; but the G minor Rhapsody was suddenly a sustained, sombre utterance, the stirring-to-life of its main theme perfectly controlled. Shaping and control characterised Beethoven's C minor Sonata Op.111 also; a first movement that was fleet and articulate rather than theatrical or massive, and a variation set in which the exfoliating decorations were naturally integrated into the scheme, to be resolved with rapt attentiveness in the coda.

Schumann'a *Etudes Symphoniques* were presented with the extra "posthumous" variations interpolated as a self-contained sequence. Again there were no self-regarding distractions, though one marvelled at the easy eloquence of the left-hand in the early variations, the effortless, exactly poised textures of the penultimate ones, and the uncomplicated exuberance of the finale. The three encores, though, offered a further insight into the strengths and possible weaknesses of Alexeyev's approach to his art. A Brahms Intermezzo was exquisite, unfurled with tact in muted colours that precisely matched Clara Schumman'a description of it as a "grey pearl;" but two pieces of Chopin were distinctly less impressive, fractionally careless, memories of past performances rather than acts of positive re-creation.

Arts guide

March 18-24

Exhibitions

WEST GERMANY

Berlin, Martin-Gropius Bau. Joseph Beuys (1921-1986). This is the first complete show of Beuys works ever presented in Berlin. There are about 150 room-sculptures and objects and about 456 paintings from the end of the 1940s to the end of the 1960s based on a cycle The Secret Block for a Secret Person to Ireland. The sculptures are an echo of real life and the artist's memories. Beuys was a political radical, who attracted plenty of hostility. This exhibition has been criticised for not showing this aspect. Stresemannstrasse 110: Ends May 1.

Bottrop, Joseph Albers Museum, Im Stadtgarten 20. To commemorate the 100th anniversary of Josef Albers' birth, 100 paintings of the artist, born in Bottrop (1888-1976), cover the full range of his work. (Ends May 5).

Bad Homburg, Sinclair-Haus Lowengasse/Dorotheenstra. From Marees to Picasso, 92 great works of European painting, on loan from Wuppertal von der Heydt Museum and 9 paintings from Marees. (Ends April 24).

AMSTERDAM

Stedelijk Museum. An explosion of colour and exuberance fills 10 of this museum's galleries in the Frank Stella retrospective of paintings and reliefs from 1970-1987. Ends April 10.

Overholland Museum. Frank Stella drawings 1956-1970. Museumplein 4. Ends April 10.

PARIS

Grand Palais. Zurbaran. From New York, an exhibition of 72 paintings retraces the artistic development of one of the great masters of the Spanish Golden Age. Influenced at first by Caravaggio's chiaroscuro technique, Francisco Zurbaran progressively abandons the strongly-contrasted rich colours for a softer palette with near monochromes. Reversing the perspective, using geometrical composition settings and shedding everything superfluous, the mystical painter of the counter-reformation seems to be a precursor of cubism. (42560924). Ends April 11.

Musée d'Orsay. Van Gogh in Paris. To mark the centenary of Van Gogh's two-year stay in Paris, a period which proved a turning point in his artistic development, the Musée d'Orsay has assembled more than 50 of his paintings and a 12 of his drawings from national and private collections. By hanging landscapes and still lives by Monet, Anquetin, Renoir, Toulouse-Lautrec and Signac next to Van Gogh's work, the exhibition brings out their influence on the transformation of the Dutch artist's traditionally sombre colours into a soft impressionist palette underlined by contrasts of blues and oranges, reds and greens. Yet in spite of the revelation of his affinities with impressionism and post-impressionism structured by a strong dose of japanism, Van Gogh used both the techniques in his search for his own, profoundly personal art expressed most dramatically in the series of his self-portraits. (45 49 48 14). Closed Mon. Ends May 15.

Centre Georges Pompidou. Le Dernier Picasso 1953-1973. By placing the last 20 years of Picasso's work in the context of contemporary art, the 95 paintings, 34 drawings and 70 engravings exhibited permit a fresh approach to the controversy caused by contradictory judgments on the ageing painter's feverish creativity. Absorbed at first by paraphrasing Delacroix, Velasquez, Manet and David, his fantasies and obsessions turned to the painter and his model and finally to the basic themes of the archetypical woman, the couple, the man. (42 77 12 33). Closed Tue, Ends May 16.

Petit Palais. Winterhalter and European Courts from 1830-1870. A retrospective of the painter of graceful feminine beauty around the thrones of France, England and Belgium. (42 65 12 73). Closed Mon, Ends May 7.

Grand Palais. Degas. An important retrospective of 275 works covers 60 years of the artist's career from his student beginnings in Italy to the rich maturity of his last years. His favourite themes of ballet dancers – there are the two versions of La Classe de Danse on display – and of jockeys and race courses, of washer-women, milliners and bathers show the diversity of his inspiration echoed by the variety of his modes of expression. Oils and pastels, drawings and engravings, photographs and sculpture complete the vision of daring and invention of the painter who helped to usher in modernity. Grand Palais (42 56 09 24). Ends May 16, Closed Tue.

LONDON

Tate Gallery. Douglas Cooper – The Masters of Cubism. A small but choice selection of 81 works on paper from Cooper's collection of cubist art of all kinds but principally of the work of the great quartet of Picasso, Braque, Gris and Leger. Ends April 4.

Tate Gallery. David Bomberg – A full retrospective of one of the most distinguished British painters of the century, yet one whose secure critical success came only after his death in 1957, at the age of 66. As a young man to London before the First World War, Bomberg was associated with the Vorticist movement, of the first importance and originality. But now we can see that far from fading into sad mediocrity, deserving of neglect, his later work, although it was superficially so different, retained all that strength, liveliness and profound originality.

ITALY

Rome, Villa Medici (French Academy). A Certain Robert Doisneau. Photographs spanning the 40 year career of Doisneau, from his touching and evocative Paris street-scenes of the immediate post-war years to a series of portraits of well-known writers and artists. Tender but unsentimental in the images of children and lovers among the rubble of the bombed city. Doisneau is illuminating, humorous, and unmalicious in his portraits: Picasso in 1952, sitting with splayed hands on the lunch-table, but with bread-rolls where the fingers should have been; Prevert posed carefully in front of the shop Merode, so that the O is covered; Colette with an enormous collection of paperweights, and Julian Green, de Beauvoir, Simenon, Dubuffet and Giacometti. Ends April 3.

Florence, Palazzo Pitti. Floralia – 80 paintings of flowers and plants with drawings, tapestries and illustrated botanical books, testifying to the Medici's precocious passion for this science, from Cosimo I onwards. Ends April 10.

MADRID

Circulo de Bellas Artes. The Romantic Tradition in Contemporary British Painting proposes that a parallel development to Modernism has embraced most major British artists since William Blake and that it is as alive today as 150 years ago. This is the first exhibition to undertake such a re-examination and also the first group exhibition of contemporary British painting to tour Spain. It features 10 artists and 36 works from private and public collections, some being shown for the first time. The romantics established a spiritual-landscape tradition which proved to be indigenous and an enduring influence in the century to follow. This lineage can clearly be traced from the 19th century through Nash, Sutherland, neo-romanticism, Moore, Bacon and British abstraction of the 1950s to the artists represented in this exhibition. Ends April 17.

GENEVA

Galerie Jacques Benador, Alberto Giacometti drawings and rare prints. 7 Rue de l'Hotel-de-Ville. (21 51 36). Ends March 26.

NEW YORK

Metropolitan Museum of Art. Every phase of Fragonard's art is included in this, the first comprehensive exhibition of his works that capture France in the last decades of the ancien regime. With 90 paintings and 130 drawings, the show comes from the Louvre with his studies of contemporaries in theatrical costumes as well as paintings like The Fête at St Cloud and The Seesaw. Ends May 8.

WASHINGTON

National Gallery. The human figure in early Greek art is the subject of 67 sculptures and painted pottery starting in the 9th and 8th centuries BC, with silhouetted stick figures and ending with the naturalism perfected in the 5th century BC. Ends June 12.

CHICAGO

Art Institute. A centenary retrospective of the work of Georgia O'Keefe evokes the world of flowers and skulls in the luminous light of New Mexico. Ends June 26.

TOKYO

Japan Folkcraft Museum (Nihon Mingeikan, Komaba). Prints by Munakata Shiko; pottery by Kawai Kanjiro. A special exhibition featuring works by two of the leading Japanese artists of the 20th century. Munakata's prints are dynamic and vertiginous (possibly because he was near-sighted from his youth onwards), while Kawai's distinctive style favours brightly coloured glazes. Don't miss the superb standing collection of crafts from all over Japan, housed in a replica of an old farmhouse building which is in perfect harmony with the unself-conscious beauty of the objects. Ends March 27.

Setagaya Museum. An American Vision: three generations of Wyeth Art. An exhibition of paintings by America's best-known living artist, Andrew Wyeth, his father N.C. Wyeth, and also his son James, organised by the Brandywine River Museum, Chadds Ford, Pennsylvania and sponsored by AT&T. It should appeal to the Japanese, not only for its exotic all-American qualities, but because artistic dynasties are something the Japanese understand and admire. Closed alternate Mondays.

Saleroom/Antony Thorncroft

Scandinavian boom

A painting, completed in 1906 by the Swedish artist Anders Zorn, of two young girls naked in a forest glade sold for £495,000 at Sotheby's yesterday, near the top end of its estimate. While not approaching the record for a Zorn of £750,000, it suggested that there is still good demand for this prolific artist and for Scandinavian painting generally.

It was bought by Ralf Ekblad, a young Swedish property developer, who has been collecting the work of Zorn, Carl Larsson, and Liljefors, the great names in Swedish art, for six years, and is is happy to be returning the painting home.

This is the big week for Scandinavian art in London, with Sotheby's and Christie's offering between them over five hundred lots from a school of painting which was virtually unknown outside its native shores even five years ago. Since then global interest has grown tremendously, with prices going up in line. Indeed the salerooms have had trouble reducing the expectations of sellers who, impressed by record prices paid for the leading artists last year, were anticipating the upward spiral to last for ever.

Most of the items will return to Scandinavia, where they were sent for sale to take advantage of London's international reputation, but two of the best were bought by an overseas telephone bidder of non-Scandinavian origin. He paid £236,500 for "Peek a boo," a view of the study of Carl Larsson, with his young daughter peering out from behind a bench, and £231,000 for another perspective of the Larsson studio. "Peek a boo" was the basis of a popular lithograph and can be considered the most famous image in Swedish art.

The London dealer Macconnal Mason was an active buyer, paying £115,500 for a most attractive picture by Eilif Peterssen, a Norwegian artist, of a lady sewing by a house with a fjord in the foreground. It was a record for Peterssen, but at the lower end of the estimate. If his reputation had been greater the price for an exquisite work would surely have been higher.

Another evocative Norwegian scene, "By the open door" by Nikolai Astrup, went above estimate at £165,000. It is a masterpiece. Significantly the other less competent painting by Astrup failed to sell, re-inforcing the truism that only the top quality items were finding new homes. The auction totalled over £2.3m, but 35 per cent was unsold. Obviously Sotheby's had been persuaded to offer some mediocre paintings to justify such a specialist auction, while demand for such an esoteric field is limited to the discerning connoisseur.

Harari & Johns of London paid £59,400 for an interior by the Danish artist Peder Ilsted. In the general sale of European pictures Sotheby's offered a flower picture by an earlier Danish artist Johan Jensen. It was estimated at up to £20,000 and realised £220,000. Flower pictures are much in demand these days.

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The risks in going public

The decision by Abbey National to recommend to its members a change of status from building society to public limited company is a bold response to the new opportunities presented by the 1986 Building Societies Act. The question now faced by building society investors – the nominal owners of these mutual organisations – is whether such boldness makes sense. The short answer is that it may do for some; but the challenges and risks for those societies that do choose to go down the routa towards full banking status are formidable.

The case for converting to a public limited company rests on the rapid changes now under way in the banking market. The dividing line between ona type of financial institution and another has been blurred by deregulation and technological change. The consumer is also becoming more sophisticated, which is taken by bankers to mean that consumers want a wider range of services from the same bank. Competition has increased as the clearing banks and others have been given freedom to attack the building societies' traditional savings and mortgage lending markets.

Against that background building societies have argued that even after a recent review of the powers in the Building Societies Act, they are still hampered in competing with the banks, both in terms of their access to funds and their ability to move into new business areas. If they want to compete on equal terms with the banks, the new option introduced by the Act of going public has it attractions – especially now that the Chancellor has removed the tax obstacles to conversion into a public limited company.

Wave of conversions

The problem, at the macro level, is that a wave of conversions among the larger societies could have worrying implications for credit because of the massive increase in the capital base of the banking system. Abbey National, for example, made profits last year of £353m, equivalent to just over 40 per cent of Lloyds Bank's profits. But with no Latin American lending to depress its price earnings ratio, Abbey National could well find itself in much the same league in terms of market capitalisation as Lloyds and the flotation would produce a massive cash inflow. It would then have the problem of finding profitable outlets not just for the increased capital but for the substantial increase in lending that the fresh capital would permit.

Like the TSB at the time of its flotation, Abbey National is convinced that the money will not burn a hole in its pocket. It believes that it will initially be able to find outlets for its vastly increased resources in the mortgage market. It is not keen to make big acquisitions and the lure of merchant banking has yet to cast a spell over the most ambitious of the building societies. Its managers are committed to a policy of continuing to concentrate on personal financial services.

Brave new world

Whether this approach proves profitable in the longer run, only tima will tell. But there is no question that for the building societies as a group, the managerial consequences of a wider role in financial services will be very testing. Their original money gathering and lending operations were relatively low-risk and simple – far from an ideal background, in fact, for the brave new world of deregulated financial services. And it is a moot point whether going public will really enhance the quality of customer service in the way that the more go-getting building society managers claim. Mutual ownership, after all, delivered a much more effective savings marketing operation in the 1960s and 1970s than the discipline of the stock market produced at the clearing banks.

That is not to say that Abbey National is wrong to take up the challenge. It may be correct in thinking that there is as much risk in staying inside the building societies' depleted ring fence as in leaving it for the wider banking area. But it is hard to see how the building societies' original image of cosy solidity and security will survive in a world where new activities will sometimes be accompanied by eye-catching losses. And for the smaller fry in the movement, for whom conversion is not an option, the outlook remains problematic.

Terror and television

WHEN THE Government puts pressure on the broadcasting authorities, the natural tendency of those involved in the media is to spring to the defence of the broadcasters. This is not always the best response. The policies of Britain's television news organisations are not invariably without blemish, and they naturally come under particular scrutiny when film of the hideous cycle of violence and counter-violence in Northern Ireland is televised. Neither the BBC nor ITV News can escape such scrutiny. The reason is plain: where there are public demonstrations, riots, or "photo opportunities" the camera is seldom an innocent observer. It is usually a part of the event, which in many cases is staged purely as a means of gaining TV time for the promotion of a particular cause.

Reason for disquiet

Thus there is good reason for the disquiet expressed in parliament and elsewhere over TV coverage of a staged IRA "commemoration," complete with rifle salute of the three terrorists killed in Gibraltar. Mr Tom King, the Secretary of State for Northern Ireland, has properly rejected the notion of a ban on such coverage. But, he added: "I am under no doubt that in a free society the media, particularly the television cameras, have a great responsibility for what they decide to broadcast." There may be a case for self-restraint by newspapers in such matters, but it is not nearly so strong as the argument in favour of such a self-denying ordinance by the TV companies.

For the power of the screen is immense. This is recognised by those who seek to exploit it, and should be recognised by those who produce it. Censorship would of course be the wrong answer; it is a matter for the broadcasters themselves. No individual piece of PR puffery by the IRA is the same as any other, and there may be compelling reasons for covering one while ignoring another. The important point is that the TV news executives should be aware of the need to make a choice. Their organisations would benefit from a general statement that their editors would in future exercise discrimination in what was to be televised about the IRA and its Protestant counterparts.

Camera as witness

The matter is more complicated when it comes to murders, such as those perpetrated by the mob last Saturday. The camera is not an innocent bystander at such events. It is an eye-witness. It could be argued that it is a witness of far greater importance than any ordinary citizen would be, since the scenes relayed by the camera serve to bring home to people the full force of what has heppened. By showing last week's non-staged event in its full horror, TV exposed the IRA murderers for what they are. Yet a witness is a witness. A witness to murder has a civic duty to give evidence. This is the view taken by the police, who have asked for a copy of the unused film. The broadcasters at first refused to hand it over volontarily, on the ground that this would place cameramen in danger on future occasions. This is a standard BBC and ITV policy. Even though the BBC wassomewhat clumsy in proclaiming it this time, it did not deserve the especial opprobrium brought down on its head by Conservative backbenchers and indeed the Prime Minister.

The broadcasters can turn the argument around. If we are witnesses, they might say, then like other witnesses in such matters, we need protection. It would be impractical to provide TV cameramen with bodyguards, as is necessary for some Northern Ireland Ministers, but it is not especially unreasonable to ask for the degree of protection that might come from refusing to hand over any film until a court order made it obligatory (even if this means a change in the law). This could become the price that has to be paid for coverage of street terrorism, since, at the extreme, cameramen might decline to take on the work if their lives are put at too severe a risk. The public might accept such a price – but first it would have to be persuaded that the TV authorities know that they ought to steer clear of sheer public-relations charades indulged in by the IRA.

Ian Davidson considers France's presidential contest now that Mr Mitterrand has declared his hand

The rivals: Raymond Barre, François Mitterrand, Jacques Chirac and Jean-Marie Le Pen

An uphill struggle for the right

ALTHOUGH it seemed increasingly a foregone conclusion, France remained mesmerised until the last moment by the question: would Mr François Mitterrand stand for re-election in the forthcoming presidential election? Now that question has at last been disposed of, it is clear that it was obscuring three larger and more interesting issues.

First, supposing President Mitterrand wins – and the polls have been promising him victory for months – what will be the implications for the government of France, with a left-wing President facing a centre-right majority in parliament? In Tuesday night's television interview, Mr Mitterrand did his best to play down any sense that there could be a constitutional difficulty, but the dilemma is more complex than he admitted.

The second issue is more difficult to forecast. Two thirds of the French electorate have apparently been finding the campaign boring so far and the proportion has risen in the past month. Moreover, a significant proportion of the electorate seems not to care passionately either way who is elected on May 8; and a substantial minority remains undecided.

In that case, what is the election about? The right is representing it as a struggle between liberty and socialism, but the indications of boredom, indifference and indecision among the electorate suggest that this particular line of attack has been missing the mark.

The Socialist Party has come a long way from the sadness and setbacks of its attempt to reform society and build socialism in one country in 1981-82. Today its programme is imprinted with prudence and pragmatism – an approximation to a modern social democratic party. It is doubtful whether François Mitterrand himself has ever had the personal convictions of a committed socialist.

By contrast, it is the parties of the right which, under the influence of Reaganism and the Thatcher factor, have taken their stand on the ideological grounds of deregulation and market forces. These are doctrines which, if not revolutionary in other parts of the world, are certainly untraditional to any French audience.

President Mitterrand's opening gambit on television on Tuesday night, that he is standing again in order to unify France and build a civil peace above party and faction, and against the greedy and intolerant, may or may not prove a winning line. But if the election becomes a battle to see who can occupy the middle ground, the task may prove easier for Mr Mitterrand than for either of his right-wing opponents.

The third issue is one which has been lurking in the background ever since 1981, but which will move starkly to the centre of political debate if Mr Mitterrand wins a second seven-year term: what is wrong with France's right-wing parties, and why can they not get their act together? The Fifth Republic is a creation of General de Gaulle and for 23 years he and his successors ruled the roost. The trouble is that they ruled with declining plausibility and declining coherence, and today the parties of the right are deeply divided.

After the lamentable setbacks which beset the Socialist Government in its early years, the right succeeded in returning to power in 1986. But its victory was not much of a vindication, with a narrow majority in parliament and the ominous shadow of a 10 per cent extremist National Front vote looming on the right. In two years, it has managed to carry out much of its programme, including income tax cuts, deregulation and the privatisation of many of the companies nationalised by the Socialists five years earlier. But if Mr Mitterrand nevertheless succeeds in recapturing the Elysée Palace, it will be a damaging verdict on the right's record, reputation, cohesion and leadership.

Anything could happen, now that Mr Mitterrand has formally joined the fray; but, ostensibly, the outcome is already a foregone conclusion – if you trust the opinion polls. He has two plausible rivals: Mr Jacques Chirac, the Prime Minister and leader of the neo-Gaullist RPR party, and Mr Raymond Barre, former Prime Minister in the 1970s under President Valéry Giscard d'Estaing. The polls have long agreed on two predictions: that François Mitterrand will come in far ahead of either Mr Chirac or Mr Barre in the first round of voting, but with less than an outright majority; and that he will defeat either of them in a second round run-off.

Recently, President Mitterrand's score has declined somewhat, while Mr Chirac has come from behind and appears to have established a small but clear lead over Mr Barre. But none of these relative shifts has yet been great enough to unsettle the odds on a Mitterrand win.

Needless to say, opinion poll scores can go down as well as up and there is still more than a month to go before the first round of voting. Mr Mitterrand's opponents predicted earlier that his lead would become vulnerable as soon as he stepped down from the Olympian heights of the presidency and into the ring with the other contenders.

On the other hand, the main difference between the French presidential election and the process under way in the US is that in France all three of the leading candidates have long been familiar figures on the political scene. Mr Chirac and Mr Barre both served as Prime Minister under President Giscard d'Estaing, while Mr Mitterrand first established a cast-iron claim to the leadership of the left when he challenged General de Gaulle in the 1965 presidential election.

On the surface, a Mitterrand victory ought to be surprising because left-wing presidential candidates can count on only about 45 per cent of the voters' support, while right-wing ones command roughly 55 per cent. But the explanation for the expected Mitterrand victory is that the right is not only divided three ways, including the extreme right-wing challenge from Mr Jean-Marie Le Pen of the National Front, but is also deeply split emotionally, and so cannot be counted on to unite in a final run-off.

A quarter of Mr Chirac's supporters will refuse to switch to Mr Barre in the second round, preferring to vote for Mr Mitterrand, and vice versa. Half of Mr Le Pen's supporters will refuse to vote for either of the other two right-wing candidates. Short of some dramatic shift of fortune, it is these divisions which could carry Mr Mitterrand back to the Elysée.

Mr Mitterrand has given the clearest hint that he will be claiming the role of moderator and unifier, renouncing dogmatic ideology and attacking the excesses of the right. Unmistakably, he intends to concentrate his main attacks on Mr Chirac's RPR party, widely accused on the left (and even in the centre) of using the privatisation programme to feather its own nest. It will be all the easier for Mr Mitterrand to seek a middle-of-the-road posture because his Socialist Party's programme represents a large shift towards the middle ground.

Do the right-wing parties advocate the construction of a single European market in 1992? So does Mr Mitterrand. Does the right advocate a stronger European defence? So does Mr Mitterrand. Does the right claim loyalty to the institutions inherited from General de Gaulle? So does Mr Mitterrand. Of course, differences remain between the Socialist Party and its right-wing opponents, but these are much less than they were.

For the right-wing contenders, the outlook is doubly difficult. The first problem, as Mr Chirac has publicly admitted, is that there are virtually no policy differences between him and Mr Barre.

The second difficulty for the right is more fundamental. The neo-Gaullist RPR is the largest party on the right and the most disciplined; but it is not large enough to impose its will on the rest of the right and for the past 15 years it has not even been as large as the Socialist Party in terms of popular following. According to the mythology of Gaullism, the President should be above party politics. That was certainly how De Gaulle played the hand and that is how Raymond Barre is playing it, since he has ostentatiously sought to place himself above the hurly burly of party machinations. But the lesson of history may suggest that, for any lesser figure than De Gaulle, access to the presidency may go hand in hand with mastery of a large and disciplined party.

François Mitterrand and Jacques Chirac both realised this a long time ago; but Mr Mitterrand was quicker and more successful in putting the theory into practice: by taking control of the Socialist Party in 1971, by co-opting the Communists into a common front and, finally, by smothering them in a government coalition which forced them first to submit and then to quit.

Mr Chirac took control of the Gaullist movement in 1974, shortly after becoming Prime Minister under President Giscard d'Estaing, and he has retained control ever since. Until now, however, his role has been more that of a spoiler than a winner, because his party has failed to gather enough support to dominate the centre-right ground. The right and centre parties have refused to unite, and the later years of post-Gaullist rule were marked by back-stabbing and treachery.

In 1974, as Minister of the interior, Mr Chirac helped ensure the victory of Giscard d'Estaing over the Gaullist candidate, Jacques Chaban-Delmas, by releasing a "secret" government poll showing that Chaban-Delmas could not win; and, in 1981, he helped ensure Mr Mitterrand's victory by ostentatiously refusing to endorse Giscard's re-election. But the current trend of the opinion polls, which show him climbing steadily past Mr Barre, seem to point to the advantages of electioneering with a large and wealthy party machine.

Mr Charles Pasqua, current Minister of the Interior, has tried to repeat Mr Chirac's 1974 exploit in reverse, claiming that a secret government poll promises Mr Chirac the victory. But the commercial polling organisations have greeted the Pasqua claim with frank disbelief and, in practice, even the Gaullists seem to expect a Mitterrand victory. That is no doubt why Mr Edouard Balladur, the Finance Minister, recently set the cat among the pigeons by proposing that, after the elections, the RPR should form a confederation with (that is, take control of) the centrist parties in the UDF umbrella organisation.

The implication of Mr Balladur's proposal, and of much of the Gaullists' language, is that they are already starting to think about what do after a Mitterrand victory. Mr Chirac has ruled out a continuation of the pattern of the past two years, in which his right-wing government has "cohabited" with the left-wing President; and Mr Barre has been against cohabitation from the beginning. But if Mr Mitterrand is re-elected, it is he who will heve the legitimacy of a renewed mandate, and the choice in deciding whether to seek a centre-left government or to dissolve the National Assembly.

Mr Mitterrand affects total serenity on this score. If he is elected, he will appoint a Prime Minister who reflects the new "presidential majority." If the National Assembly prevents the Government from governing, there will be new general elections. In other words, President Mitterrand, like Jacques Chirac, is aiming to take over enough of the centre parties to shore up his position. The difference is that the Balladur proposals sound like a threatening takeover bid, whereas Mr Mitterrand obviously aims to be seductive.

Whatever the outcome, the Gaullist party is faced with two awkward questions. Why, despite the historical charisma of General de Gaulle, has it failed to encompass a larger share of the centre-right vote; and why, despite its strong law-and-order platform, has it failed to pre-empt the establishment of a substantial extremist National Front party to its right?

The tables accompanying the article on the EC and Efta which appeared on this page yesterday contained a number of errors. Correct figures appear below.

EC	GNP '86 (US$bn)	EFTA	GNP '86 (US$bn)
Belgium	115	Austria	94
Denmark	79	Finland*	70
France*	723	Iceland	4
Greece	39	Norway	69
Ireland	22	Swe.*	131
Italy*	600	Switz.	142
Lux'bg.	6	Total	510
N'lands	175		
Portugal	28	Total EC	
Spain	227	imports	
UK	554	fm EFTA	80
W.Germ.	897	Total EC	
Total	3,465	exports	
*GDP		to EFTA	89

Source: International Financial Statistics and Eurostat

OBSERVER

Kaufman's last Comments

■Henry Kaufman, one of the great Wall Street gurus of all time, has written his last contribution to Salomon Brothers' Comments on Credit.

He recalls that it was originally an internal memorandum. It first appeared in March 1962 and was only two paragraphs long. The sales people soon started sending the weekly analysis to clients. Then Comments on Credit was established with a formal mailing list.

Kaufman concentrated on the first page, which he saw as a forum for evaluating monetary policy or market conditions. Periodically, be says modestly, he would use it to release new interest rates forecasts or assessments that would have a bearing on the direction of interest rates over the near term. At times the effect could be electric.

There were also diversions. Readers were once asked to suggest a synonym for disintermediation. Among the proposals were circumfiduciation, de-mediation, anticonduitation and unbanking. So disintermediation lives on.

Kaufman is leaving Salomon at the end of this month and will set up his new firm called Henry Kaufman & Co Inc at the end of April. He will be managing funds, doing some consultancy work and will undertake some public speaking engagements.

It is his writing and analysis that will be missed. As he says in his valedictory, he tried to tell it like it is.

Enough is enough

■Are we alone in believing that Francois Mitterrand may well fail to be re-elected President of France, having delayed the announcement of his decision to stand for so long?

Forget the opinion polls about the first ballot on April 24 which show Mitterrand with a clear lead over his rivals. The only poll that matters is the second ballot on May 8 between the two front runners in the first. The fact that Mitterrand is already 71 and is running for another seven year term should count against him. One of the best things he could do in the campaign would be to declare that he will finally seek to change the seven year rule, which was introduced under de Gaulle when France wanted strong government and has had a debilitating effect on French politics almost ever since.

Bridging the sexes

■Baroness Platt of Writtle, chairman of the Equal Opportunities Commission, was expounding her views this week on the mental attributes of women, which she argued were the same as those of men.

Woman only do what have been seen as "women's things" because of social conditioning and upbringing, she says. There is no such thing as a woman's mind as opposed to a man's mind. Differences are purely due to environmental conditions, she contends.

The Baroness was speaking at an Institute of Mechanical Engineers dinner to welcome its second woman honorary fellow, Nancy Fitzroy, president of the American Society of Mechanical Engineers. Platt was its first.

The dinner, slotted between the Centenary Lecture on Thin Shell Structures and last night's lecture on The Growing Pains of Ceramics Processing, was less concerned with engineering and more concerned with a woman's role in what has been traditionally a man's world.

Debate became heated at times. Platt had to correct one of the male guests who inadvertently referred to an engineer in general as "he".

Career women had special problems, she argued. "I've never met a single career woman who didn't want a wife," she said.

Equality is a way of life with the Baroness who puts her "environmentalist" beliefs into practice. She has three grand-daughters and one grandson and all will be receiving the same birthday present - a bridge-building outfit and a model aeroplane.

Stars in Japan

■Mick Jagger, Britain's middle-aged rock star, is collecting about $5m this week for giving a few concerts around Japan, which has become the most lucrative venue on the circuit for the performing elite. This is less than Michael Jackson earned earlier this year, but certainly more than Jagger could command at home.

So far, Jagger has not appeared in any commercials, unlike Paul Newman advertising a credit card, but Suntory is a main sponsor of this week's concert series.

Suntory said: "Mr Jagger's character matches that of our new beer, Suntory Dry. His appearance in Japan is epoch-making, so this should help accelerate the sales of Dry beer."

House no mansion

■The Lord Mayor of London will have to live with the old decorations in the Mansion House for a little longer as the Roman amphitheatre dig next to the Guildhall gathers pace.

The development proposed for the site would have housed temporary living quarters for his Lordship to allow redecoration of the Mansion House, but the plans are now back on the drawing board. Everything is holding for the dig.

The Museum of London archeologists are working to a mid-April deadline at present, though according to the Corporation of London which owns the site their "licence to dig" is open-ended. Discussions between planners and architects are still going on.

In the meantime, English Heritage has sent confidential recommendations to Nicholas Ridley, the Environment Secretary, and Brian Hobley, Chief Urban Archaeologist for the City of London, has submitted a list of eight options, the idea of some sort of interpretative display on the lines of the Jorvik Centre in York featuring uppermost.

The dig itself has uncovered some interesting timbers in the arena area from what may have been a pre-stone amphitheatre although the archeologists have not decided what the timbers are.

Messalina's ways

■A curious new group has been set up in Oxford called Tories against Hybris in High Places (1988). Hybris is, we assume, a peculiarly precious form of the word "hubris".

The group disseminates riddles. One of them runs: "Why do the back-benches of the House of Commons today resemble the streets of ancient Rome during the Principate of the Emperor Claudius (41-54 AD)?"

The answer is: "Because the former and the latter were crowded with cast-off Senators for whose services the most notorious lady of the time had no further use.

Far more interesting, however, is the proffered hint: "For You-know-who's recent consumption of Ministers see Hansard passim; for Messalina's very different appetite, see Pliny the Younger, Natural History, Book X, 172."

Wa looked up Pliny. Messalina was Claudius Caesar's consort. The story about her cannot be repeated here – even in Latin. Besides, the precise meaning is obscure, both in the original and in the translation offered by the Loeb Classical Library.

Copies of the riddles may be obtained by sending a stamped addressed envelope to TAHHP, 94 Edwin Court, Binsey Lane, Oxford.

ECONOMIC VIEWPOINT

The need for a European currency

By Samuel Brittan

THE UK Secretary of State for Trade and Industry, Lord Young, reminds me of one of those British road signs which were twisted round during the Second World War to muddle any German invaders. As they are, they stand in the wrong direction; but reverse them through 180 degrees and you have a clear idea where to go.

His advice to British businessmen at the end of last week that the European Monetary System was not important in the drive for a unified European Community market by 1992 serves this function. Turn it through 180 degrees and what we learn is the need to go well beyond the EMS to a common European currency.

The system has had, as the chart shows, a great deal of success in narrowing inflation differentials. Few people realise that the French inflation rate is now less than 2½ per cent and within striking distance of the West German rate. Italy, where one used to have take yet more million lire each time one travelled there, has now got its inflation rate down to 5 per cent – despite an enormous Budget deficit.

Nevertheless the progress made will be threatened unless the EMS can advance much nearer to full monetary union and ultimately a common currency, which would put it on a par with other unified markets such as the US.

The deputy director general of the Banca d'Italia, Tommaso Padoa-Schioppa, discussed in a paper last October the "inconsistent quartet" of objectives which the Community is still trying to reconcile: free internal trade; full capital mobility; fixed, or at least managed, exchange rates; and national autonomy in monetary policy. The fourth – national monetary autonomy – will, he believes, have to go. The defence of agreed exchange rates will require not merely enhanced co-operation but "a willingness to subordinate domestic monetary goals to exchange rate stability when circumstances require" (Bank of England please note).

He draws an analogy with a domestic run on the banks, where the central bank, acting as a lender of last resort, should fully accommodate any demand to convert deposits into bank notes without worrying immediately about the monetary statistics. But, for such procedures to work internationally, EMS central banks "will have to work almost as departments of a single monetary authority."

On a more homely level, the use of 10 different kinds of money in the EC is an obstacle to a unified market. Traders do not know what one money will be worth in terms of another. Ordinary citizens – who should be the object of the whole exercise – have to pay large dealers' margins when they travel. There are also the complications and documentation involved in making a payment across the exchanges, which do not arise in a single currency area.

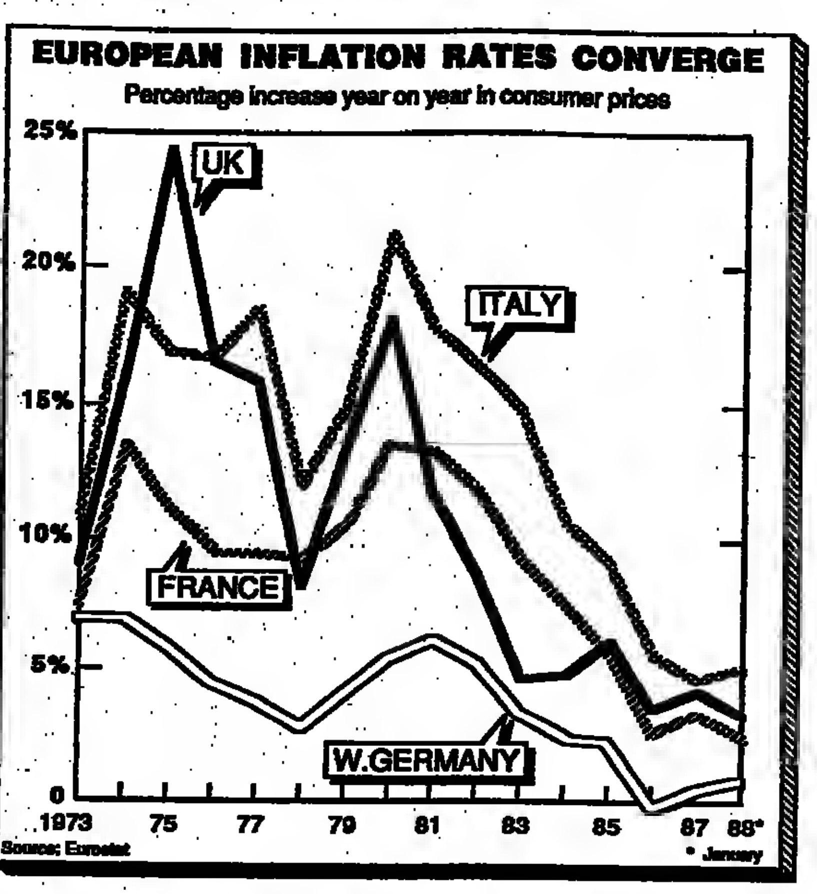
Instead of one set of interest rates across the Community – differentiated only by the term of the loan or the credit standing of the borrower – there is a different set of nominal interest rates in each country. No one knows whether these differentials compensate for either inflation differences or future exchange rate changes.

If we are to have a unified goods or capital market, EMS realignments will need to become an unnecessary anachronism. The last major realignment in January 1987 only involved a 3 per cent change in the French franc/D-Mark parity, and was partly forced by a poorly co-ordinated response to capital movements. The French Government may or may not want another change after the coming presidential election. But after that, adjustments in domestic monetary policy should be able to take the place of currency realignments.

If anyona thinks this trend of thought Utopian, let him note that the new Franco-German Finance Council held this week the first of its planned quarterly meetings. A European central bank has the support not only of France, bnt of ths German Foreign Minister, Hans-Dietrich Genscher.

The Bundesbank has worked out the implications in some detail. It rightly insists that any such central bank must enjoy the same degree of autonomy as it does, if monetary union is not to be another word for inflationary finance. It goes on to emphasise that there will have to be common European interest rates and no possibility of an independent national monetary policy.

At present, it is using these ideas in a debating sense to fight off the European central bank idea. For instance, I was asked in Frankfurt: "Will President Mitterrand accept these implications? Will Mrs Thatcher?" Whatever the British do, the French are indeed likely to see where their true interests lie; and the Bundesbank may find its defensive brief taken far more seriously that it imagined.



As in the case of the EC itself, the British may simply miss the bus. While the Prime Minister is digging in her heels ever more obsessionally against EMS membership, in a way startlingly reminiscent of Harold Wilson over sterling devaluation, the EMS may be superseded.

There are several different ways in which a European currency could emerge. In the words of a 1987 report by the Federal Trust, a UK study group: "Currency competition will set in motion a process that reverses Gresham's Law. Good money will tend to drive out bad." But, in the end, economies of scale are likely to result in a predominant currency emerging.

Indeed, there should be nothing to stop anyone making a contract in terms of any mutually agreed unit of account, whether in a national currency, Ecus, gold, dollars or a contract indexed against inflation. But, for most purposes, a single European currency which preserved its real value would have the edge.

Convinced Eurocrats would like to build the common currency around the Ecu. But the latter is nothing but a basket of 10 currencies, inferior to the strongest and most stable of its components. The Federal Trust makes some interesting suggestions for enhancing the Ecu'e acceptability, including Ecu-denominated gold coins. But it says: "Since few firms have costs denominated in Ecus, they have little interest in receiving payments in them."

The best candidate for the common currency is surely the D-Mark, which has a proven track record of stability. Some cosmetic wrappings may be desirable politically. But if the common currency is nothing but the D-Mark in disguise, Europe will be well served.

One way of achieving a D-Mark standard without the name would be for EMS exchange rates to be fixed irrevocably and for existing central banks to fuse their operations, as suggested by Banca d'Italia's deputy director general. If it does not make the mistake of dragging its feet, the Bundesbank can be sure of having a predominant influence.

If exchange rates can remain fixed for long enough, we can reach a situation similar to that under the gold standard, where the different European currencies are in practice interchangeable and differ mainly in shape, name and denomination. Local currencies, with fluctuating exchange rates against the key ones, could of course continue to circulate in the periphery.

Incidentally, as Tommaso Padoa-Schioppa points out, monetary union does not require a unified or even co-ordinated European fiscal policy. National governments would have to finance any deficits in a unified capital market, which would judge them by their creditworthiness. Moreover, there would be no possibility of financing the debt by printing money, as monetary policy would be determined at the European level.

A final word on the theory: would not European countries be giving up a valuable adjustment instrument if they could no longer devalue or revalue against each other? Not really. The case for fluctuating exchange rates was undermined when the Phillips Curve collapsed. The Phillips curve represented the trade-off which was supposed to exist between unemployment and inflation, with more of one bringing less of the other.

Now that it is clear that there is no such trade-off and that high inflation cannot buy lower unemployment in the long run, the case for foregoing the benefits of a single international currency becomes very feeble.

Economists are then forced back on the right of countries "to choose their own rate of inflation," which is a peculiar right when inflation rates are as close together as they are in the European Community and even the short-term trade-off between unemployment and inflation is tending to vanish.

Academic opponents of monetary union sometimes argue that relative price changes may be required to accommodate "real shocks". Examples include a resource discovery such as North Sea Oil, the transfer burden of German reparations after tha First World War, or a long-term outflow of capital such as tha one from Britain to North and South America before that war.

The relative prices which need to be changed might be the terms of trade, that is the ratio of a country's export to import prices. They might also be the ratio of the prices of goods entering into international trade to those of sheltered domestic goods and services within a country.

Ronald McKinnon, of Stanford University, has examined the 19th century price data, when the world was effectively on a single currency standard based on gold, and has discovered little evidence of either kind of relative price change.

Professor McKinnon does not believe that gold was, or would be today, a particularly good anchor. But the fixed exchange rate system of which it was part did bring nations together on a common price level and avoided the dramatic swings in international competitiveness of the 1970s and 1980s, which were far greater than – and sometimes in the opposite direction to – those required to change international price ratios to remedy imbalances.

Indeed most members of the Organisation for Economic Co-operation and Development comprise an optimal currency area. The main reason for going ahead in Europe alone is that agreement between the Big Three blocs – the EC, the US and Japan – would take too long politically; while the Community has the chance to move to a common currency which would cover well over half the external trade of member countries.

A unified European market without a European currency would he like a building without foundations.

THURSDAY BOOK REVIEW

Gorbachev's Challenge

Economic Reform in the Age of High Technology

By Marshall Goldman
W.W.Norton; £12.95

THE GROWING enthusiasm of Soviet and some East European leaders for competition, market forces and more democracy has revived the familiar arguments about the susceptibility to reform of the centrally planned economies. More specifically, many are asking whether Mikhail Gorbachev can overcome the powerful forces of inertia in the Soviet Union and drive it into the 21st century as an economic superpower capable of competing with the West.

High technology, however, has rendered such considerations 10 years behind the times, according to Marshall Goldman, long-standing critic of the Soviet system. Gorbachev's Challenge, his latest salvo, argues that, even if the Soviet leader could win the support of the bureaucracy and managers of enterprises for his reform programme, ths Soviet Union would still remain a second-class economic power.

"Economic leadership will belong to those that lead the way in high technology . . . and the traditional prescriptions for reform are unlikely to bring the Soviet Union into the high technology age."

Like Gorbachev and his main economic advisers, Goldman argues that merely increasing tha efficiency of the present system is not anough; a fundamental restructuring is required. But Goldman's version of *perestroika* presents the options with a harsh clarity that neither the Soviet leader nor even his more radical advisers have cared to adopt.

The Soviet Union will not be able to sustain its economic power and compete in the high technology arena, he insists, without an economic and political upheaval involving savage cuts in heavy industrial production (and hence military expenditure) to free resources for the development of light industry and consumer goods. It will also require drastically reducing the scope of central planning, breaking np banking and industrial monopolies and devolving power from ministries to enterprise managers.

This seems to be a long way from the *perestroika* envisaged by Abel Aganbegyan, the Soviet leader's favourite kite flyer, who recognises a place for market signals in the construction of tha economic plan, but insists that "a socialist economy is by nature planned."

"Nothing proposed so far," says Goldman, "would alter the basic framework of central planning, investment and state ownership of the means of production.

Within this structure, some forms of prodnct and process innovation can flourish; he cites large-scale projects, the development of Soviet computers, nuclear weapons, space technology and advanced materials. But unlike the "somewhat planned" economies of Japan, Taiwan and South Korea, the Soviet system allows no role for the small, independent enterprises and venture capital organisations which have played sucb a considerable role in those countries' development of high technology.

The chasm between laboratory and factory, and the absence of small start-up firms, leaves the Soviet Union competing with "one hand tied behind its back," at least in the field of high technology. Progress is further impeded by tbe low status afforded to service industries and the deep-seated fear of the free flow of information (calls for *glasnost* not withstanding) with which much new technology is concerned.

Goldman allows Soviet leaders two options: radical reform and a reduced international role, militarily and politically; or modest reform bringing marginal improvement but continuing the relative decline in Soviet living standards. He is pessimistic about the prospects: "In the end, Gorbachev, like his predecessors, will probably have to settle for an economy that must rely more on its natural riches than on its creative potential."

His case is well presented and deserves a close reading, but it is hard to escape the conclusion that his assessments are coloured by an innate prejudice against ths Soviet system. Had his examination of otber attempts to reform the Socialist economic system, in China and Hungary for example, been balanced by an examination of successful co-operation between government and industry, such as that in Japan and West Germany, he might have allowed Gorbachev a wider range of options and his country a rosier future.

Margaret van Hattem

Letters to the Editor

Enterprise should be coherent

From Mr J.W. Eversley.

Sir, Derek Broome made two telling points about the lack of coherent Government policy towards the smaller firm (March 17). But he appears to underestimate the need to support smaller business growth in the economy, suggesting that current initiatives are likely to be fully adequate.

As one of the larger enterprise agencies, with well over 10,000 clients in any one year, we are serving three distinct markets:-

1. The unemployed/redundant person who is considering self-employment, using the Government's enterprise allowance scheme.

2. The existing company, which may lack management or specialist technical expertise and requires counselling/consultancy support to overcome current problems.

3. The snccessful company capable of growing, but requiring relevant advisory services to help it to manage its growth.

In order to assist the first and second group of clients we need soma core resources, which should be covered by a budget of £100,000 per annum. Since most of the clients will be unable to pay, this would be a contribution from Government towards tha encouragement of small business start-up – more likely to be effective than the undiscriminating broad-scale measures of its previous regional policy.

The support of successful companies, monitoring and appraisal work, on behalf of equity and loan capital providers, which we undertake as a paid service, will yield us a fee income sufficient to cover our remaining budget needs. We could double the core funding by our ability to earn fees; the "leverage" which Government is always seeking for its grants would surely satisfy even the most anti-interventionist politician.

Like Mr Broome, we feel that Government needs to decide on its priorities and then rationalise the financial support it gives to the various advisory services.

J.W. Eversley,
The Tyne & Wear Enterprise Trust
Portman House,
Portland Road,
Newcastle Upon Tyne

Hyundai service is not 'dumping'

From Mr A.H. McQuillan.

Sir, I was interested in the reaction of the chairman of the Australian Shipping Conference to a recent report in the Financial Times regarding the support being given by European Community exporters to a South Korean line against which an anti-dumping complaint has been lodged by EC shipowners.

The exporters' view, expressed by various shippers' councils, is that Hyundai's low cost service is justified by their lower crewing costs, slower and more economic service, and to a certain extent by introductory discounts for such a new service.

The EC Memorandum of Shipping allows for different levels of service and differing rate structures. These do not constitute unfair pricing or dumping. In order to establish dumping it has to be shown that tha alleged infringer is receiving non-commercial advantages and is causing damage to the complainants. This the lines concerned have failed to do. The low cost Hyundai service has been welcomed by manufacturers of low value, high volume goods who have enjoyed increased market share in Australia as a result.

Significantly, many exporters continue to make greater use of the Conference services for time-sensitive consignments and they have no wish to see either the Conference or the Hyundai service damaged. That is why shippers' councils in Europe have made counter-submissions to the Commission, pointing out that many of the European shipping lines which are party to the complaint enjoy similar snbsidies, and that there is no concrete evidence of any damage having been caused to any European line as a result of the emergence of Hyundai.

A.H. McQuillan,
British Shippers' Council,
Hermes House,
St John's Road,
Tunbridge Wells, Kent

No-win, no-fee system is better

From Mr John Robinson.

Sir, Leo Herzel and Daniel Harris's insight (March 17) into increased litigation in the US highlights once again the comparative disability of UK citizens. Here, litigation is a luxury only for the very rich or the welfare-claiming poor.

While it is agreed that contingency fee arrangements compound the problem of a US court system already overloaded, they do at least make litigation available to all – regardless of income.

Litigation is denied to a wide range of middle income people in the UK because we do not have such a system. What kind of legal system is it that forces people into selling their homes and assets to raise the money to proceed civil suits?

The legal profession in the UK has steadily resisted the contingency fee system on the premise that it prejudices the client/lawyer relationship. This is nonsense. The reason the Law Society is against it is that it would expose incompetent lawyers to the keen wind of the competitive market place.

The no-win, no-fee concept demands skill and ability. In the present situation in the UK it does not matter if ths client receives bad advice or sloppy advocacy – he still has to pay through the nose. In the contingency fee system, inept lawyers go hungry, and rightly so. Good ones will get rich – and rightly so.

That the contingency fee system cannot work in criminal and certain civil actions is no reason why it cannot be introduced immediately for appropriate litigation. The excruciatingly high cost of justice in the UK for successful litigants, and the outrageous costs of what may prove to have been glib and inadequate representation for unsuccessful litigants, is now untenable.

John Robinson,
8 Deerplay Close,
Burnley, Lancashire

'When the CBI and the TUC agree they are usually both wrong'

From Mr C.D. Hitchings.

Sir, It was predictable that the Confederation of British Industry (CBI) would be against portable pensions (FT report, March 14). More surprising is that the Trades Union Congress (TUC) agrees. When these two agree on anything, they are usually both wrong.

Portable pensions are good because a final salary pension scheme is something of a confidence trick; it provides a good deal for employees who stay for their whole working life, largely at the expense of those who do not. (It gives a notably good deal to those who stay until they retire and see a large earnings increase over their latter years, which category includes directors.)

But it is bad for companies: it creates uncertainty in costs. (No one worries now because costs are falling, but finance directors know that pension costs depend on equity values and vary inversely with ability to pay.)

The TUC has been blinded by the myths always trotted out in defence of the final salary scheme. Let us deal with them:

Personal pensions are money-purchase and their value is thus capricious; a final salary scheme guarantees a pension in line with requirements. There are few long periods over which equities have not beaten inflation. Where returns have been low, it has been when interest rates were high and annuities cheap. A final salary scheme guarantees only to those working for the same firm for 40 years; the returns for the rest are equally capricious.

Employees are not interested in pensions, and without a scheme the young would not provide enough. They are not interested because they do not understand – the final salary scheme is deliberately complex, to disguise the minimal provision made by the young anyway. (If the scheme of which I am a member could tell me how much was mine, I would be very interested - if it did, however, I would probably be appalled.)

The above used to be true, but the pension industry has reformed itself. The government has legislated against some abuses, and the early leaver's position has improved. Bnt to early leavers even the best schemes give only the legal minimum, which is to upgrade pensions by a maximum of 5 per cent per annum. Over the past 20 years equities have risen by an average of 11 per cent per annum.

Employers do not like portable pensions because their young employee says, "You told me you put 10 per cent of the payroll into your pension scheme; please put my 10 per cent into mine," and they must refuse. In fairness, the younger employees must accept this. Unless they know they will work for that company until retirement they should still opt out, in the knowledge that they will have a pension they can understand from an organisation which has no interest in their future choice of job, nor the authority to influence it.

If the TUC still wavers from that advice, it can consider the "Berlin Wall" dilemma. If final salary pension schemes are such a good idea, why is membership of them compulsory? The government is dismantling the "Wall". Employers are doing their best to build other walls. The TUC should not be helping them.

C.D. Hitchings,
52 Waldemar Avenue, SW6

FINANCIAL TIMES
Thursday March 24 1988

Angry rivals hit back at Mitterrand's claims

BY IAN DAVIDSON IN PARIS

PRESIDENT François Mitterrand's right-wing rivals have been taken aback by his fierce if implicit denunciation of them for divisiveness, sectarianism and intolerance, during *his declaration* of his candidacy in the French presidential election campaign on Tuesday night, and they have hit back with equal fierceness.

Mr Jacques Chirac, Prime Minister and candidate of the neo-Gaullist RPR party, and unmistakeably the chief target of President Mitterrand's denunciations, commented that he was "astonished by the violence of the remarks of the Socialist candidate", and rejected Mr Mitterrand's claim to be able to unite France and the French.

During his declaration on television on Tuesday night, Mr Mitterrand said: "I want France to be united, and she will not be if she is taken over by intolerant spirits, by parties which want everything, by clans or by *bands* . . . Nor will France be united if particular interests, egoist by nature, exercise their domination over the country, at the *risk of tearing apart the social* fabric . . . It seemed to me that I was in a position to take a stand, to avoid these seeds of division of which I was speaking."

In his response, Mr Chirac in turn denounced the party political bias of Mr Mitterrand's remarks, and went on to reiterate his proposal for a public policy debate with Mr Mittarrand. "What is at stake is now clear. There is on one side the Socialist Party which wants to recapture power to pursue a Socialist policy, and whose candidate adopts a language of a rare violence which risks setting the French against each other. On the other side, there is the majority which has been governing for two years in calm and unity, and which has achieved results in terms of security, economic progress and social justice . . . It is *this* union which will allow us to go forward."

Yesterday morning Mr Mitterrand presided as usual over the weekly meeting of the Government, which was preceded by a brief tête-à-tête with Mr Chirac, his Prime Minister. The atmosphere at the cabinet meeting, which is likely to be one of the last before the first round of voting on April 24, was afterwards reported to be glacial.

Mr Raymond Barre, Mr Mitterrand's other main right-wing rival, also issued a stern counter-attack. "Ever since his entry into the Elysée, he has defined his seven-year term as a fracture of our society, and has presented himself as the president of one fraction of the French against the other." He questioned whether Mr Mitterrand was *best placed* to ensure civil and social peace, after having spread division and discord.

Though Mr Mitterrand had not specified Mr Chirac and the neo-Gaullist party by name in his television interview, the identity of his target was spelled out yesterday by his supporters. Mrs Edith Cresson, former Socialist minister, accused Mr Chirac of conducting a campaign based on money and demagogy.

Meanwhile, Le Monde has published an opinion poll which, like so many others, points towards a Mitterrand victory, yet shows that the French voter is perfectly capable of holding contradictory opinions.

On the one hand, 49 per cent want a second Mitterrand term, whereas *44 per cent* do not; and 60 per cent want him to have a parliamentary majority of his own stamp, whereas only 32 per *cent favour a continuation of* "co-habitation" with a right-wing parliamentary majority. On the other hand 45 per cent would prefer a liberal government policy, compared with 40 per cent favouring a social-democratic policy; and yet 54 per cent expect Mr Mitterrand, if re-elected, to pursue a left-wing policy.

Uphill struggle, Page 14

Robert Thomson reports on events likely to dominate China's National People's Congress

Tuning in to the democracy hot line

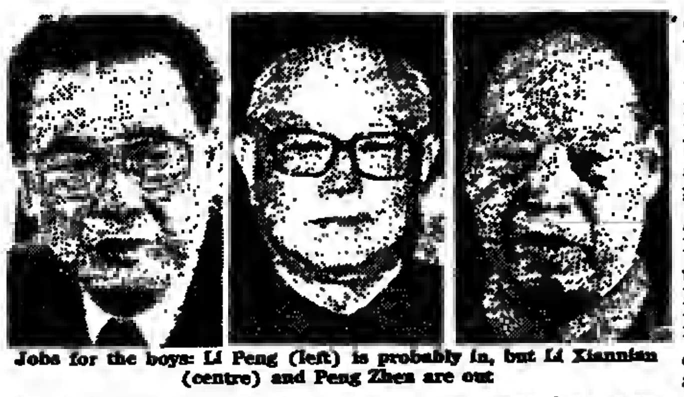
THE CHINESE VERSION of democracy, the National People's Congress, with delegates including a Hong Kong television star and a singer from the south, begins its season tomorrow in Peking with the promise of unscripted debata and unexpected plot twists that will prove the Communist Party no longer stage-manages the masses.

We are told that a delegate from a remote Tibetan village travelled by helicopter to ensure that he would be there to do his hit for democracy, while the state-run television station has never before devoted so many resources to a single event. All this for the National People's Congress (NPC), the parliament long regarded as little more than a rubber stamp.

The emphasis on public participation – newspapers will have democracy hot lines for reader responses to televised debates – reflects the present leadership's passion for populism, a passion that is partly a reaction to the party's past alienation of the common person and partly a reflection of fears that the Chinese people are losing their enthusiasm for change. In particular, tha party is concerned that the grand reform plan has been devalued by inflation, which Chinese researchers say is now about 10 per cent, although the actual figure could be double that.

It is a measure of China's new-found openness that the major personnel changes to be approved by the NPC have been common knowledge for weeks, and that the legislation under consideration has been on the agenda for several months or more. Appropriately enough, a new secrecy law will be discussed, and, if passed, information published in local newspapers will no longer be "secret."

Sections of the work report to be delivered by Mr Li Peng, the acting premier, have already leaked out. He will apparently reintroduce a character called the "new socialist man," who is almost a renaissance man, and is certainly less revolutionary than the previous "new socialist man" envisaged by Mr Mao Zedong, the former leader. Mr Li's model is "rational, moral, cultured, and ethical."



Jobs for the boys: Li Peng (left) is probably in, but Li Xiannian (centre) and Peng Zhen are out

If Mr Li is not confirmed as premier during the sitting, then there is more *conflict* in Chinese politics than meets the eye. It will also be a surprise if Mr Yang Shangkun does not become president and Mr Wan Li, a vice-premier, is not chosen as the new head of the National People's Congress. As such, the changes will *consolidate the gains* made by reformers at a landmark meeting of the party last October.

Mr Yang will replace Mr Li Xiannian in the largely ceremonial post, although President Li, known to ordinary Chinese as the "weather vane" for his ability to read *shifting* political winds, does have grounds for complaint about his retirement. The appointment of Mr Yang, aged 82, *is hardly part of tha leadership* rejuvenation drive – Mr Li is only 79 – but then Yang is a close and trusted friend of Mr Deng Xiaoping, the *paramount* leader. It is simply a matter of jobs for the boys.

Mr Wan Li, 72, an enthusiastic *reformer and tennis player*, will replace Mr Peng Zhen, 86, who has had a long and colourful political past, and is reportedly *annoyed that his political future* has been curtailed. Mr Peng is far more complex than his "conservative" tag suggests, although it is true that his emphasis on the "rule of law" was more to do with giving criminals hefty jail sentences than in developing a truly independent legal system.

As well as new ministers – defence and the People's Bank, the central bank, are likely to get new leaders – there will be new ministries in an attempt to streamline the Government. *However, it* has not been a simple matter telling long-serving bureaucrats that their bureau is no longer needed, and so, instead of abolishing ministries, the NPC will be asked to approve mergers. The state economic commission will be merged with the State Planning Commission, and the various power generetion and related resource departments will be brought together in a super energy ministry.

The ministry of radio, film and television will probably be merged with the ministry of culture, but film production, one of China's boom industries, will be given almost complete autonomy within the new structure. At least four powerful investment agencies, comprising representatives from several ministries, are likely to be established to allocate funds to key projects.

If television cameras are allowed into previously closed NPC sittings, viewers will see *that* the most controversial issue in the country is inflation. The delegates will be tempted to solve the problem by introducing more subsidies all round, but that would be a setback for a price reform programme designed to trim subsidies, and would be a budget burden – total subsidies already account for 25 per cent of government spending.

It is understood that Mr Zhao Ziyang, the party general-secretary and Mr Li Peng disagree on the acceptable level of inflation: Mr Zhao apparently thinks that 8 per cent is fine, although Mr Li will not accept more than 5 per cent, and wants policy to ha adjusted accordingly.

Significantly, Mr Zhao Ziyang took the gloss off Mr Li's work report by making a major policy statement himself at the weekend. The upbeat Mr Zhao emphasised the need for "open" and "clean" government, and said the country was on the fringe of an economic cycle that promised both high growth and stability.

Mr Zhao also stressed the importance of an enterprise law which would give factory managers more power at the expense of party officials. Naturally, the law is a sensitive matter, and was rejected last year by the NPC. A western diplomat explained that the party chief will be highly embarrassed if the law is again knocked back because his speech made clear to the delegates that "the leadership approves it, the party approves it, and you had better approve it."

Linked to the enterprise law is a bankruptcy law, now watered down to become more of a merger law. Hopelessly unprofitable factories will not close, but will be taken over by other, more successful enterprises which agree to buy the assets and to take on the redundant staff. NPC delegates will also be asked to give province status to Hainan Island, referred to variously as "China's Hawaii" and the "new Taiwan," and the South China Sea site of further proposed experiments with economic reform.

EC inquiry likely into Rover-BAe proposals

By William Dawkins in Brussels

THE European Commission is expected to launch a formal inquiry within the next week into UK Government plans to write off substantial amounts of the state-owned Rover Group's debt as part of its proposed takeover by British Aerospace.

The UK formally notified the commission on March 14 that the Rover sale would involve some kind of state aid and is waiting for the outcome of talks between the companies before giving details. Until then, the commission is reserving its position.

Almost all state aid from EC Governments has to be vetted by the commission.

Lord Young, British Trade and Industry Minister, said yesterday he had "no reason to be anything other than confident" about the outcome.

The commission emphasised that it was open-minded whether any write-off, which would count as a state subsidy under EC law, would give Rover an illicit advantage.

At a meeting in Brussels with Mr Peter Sutherland, the European Commissioner for competition policy, Lord Young explained the UK Government's objectives in privatising Rover, which would remove the last vestige of state control from the UK car industry. He would not disclose the size of any government debt write off, which was "still a matter for negotiation."

Articla 93 of the Treaty of Rome gives Brussels power to ban or alter state subsidies "not compatible with the common market." It can allow state aid for social reasons, to remedy serious economic upsets or where common European interests are at stake, among other special cases.

The first step in the inquiry will be a request for other member states, Rover's competitors and others affected by the deal, to put their case to Brussels, usually within a month.

The investigation is likely to continue past the April deadline the British Government has given Rover and British Aerospace to conclude their negotiations.

Rover's case is the latest example of state aid for the car industry to be scrutinised by a commission wedded to introducing competition to the sector and encouraging the removal of overcapacity.

Last year, Brussels insisted that the UK Government should scale back debt write-offs for Leyland Vehicles during the company's takeover by Daf Trucks of the Netherlands.

Commission competition officials are examining a French Government plan to write off FFr12bn ($2.09bn) worth of Renault debt.

That is less than the figure of more than £3bn ($5.49bn) suggested as being considered for Rover, a far *smaller company* than Renault. The commission is also investigating what it believes might be the artifically cheap price *Fiat paid for* Alfa Romeo in 1986.

Land Rover ballot, Page 8

UK mutual to go public

Continued from Page 1

this month it launched an interest-hearing current account scheme, and from June this year will be a *member of the Cheque* and Credit Clearing Company.

Abbey National's move would give it greater flexibility in the markets, Sir Campbell said.

Though building societies could now raise subordinatad debt – *long-term* borrowing on money markets – this was more expensive than the issue of equity by a limited company.

Mitsubishi drops bid

Continued from Page 1

growing criticism from Washington, in particular that Japan, which has overtaken the US as South Africa's higgest bilateral trade partner, has taken advantage of US disinvestment and sanctions.

Key sections of the US Comprehensive Anti-Apartheid Act authorise President Ronald Reagan to limit imports of any foreign product or service from a country which takes advantage of US disinvestment or sanctions.

An even toughar Bill, presented by Democrat Representative Mr Ron Dellums, is currently being debated in Congress and is expected to increase the pressure on third countries like Japan.

No US company was bidding for the Iscor contract hut several European companies are competing hard for the 14 contracts to supply plant and equipment for the new mill which will turn out high quality strip steel, much of which is currently imported.

According to Japanese Finance Ministry figures, Japan'a two-way trade with South Africa increased by 19 per cent to $4.27bn last year while US trade fell sharply from the 1986 figure of $3.52bn.

The emergence of Japan as South Africa's biggest trading partner has led to policy differences between the Japanese Foreign Ministry and the powerful Japanese Ministry of Trade and Industry (Miti).

World Weather

		°C	°F			°C	°F			°C	°F			°C	°F
Ajaccio	S	16	61	Dubrovnik	C	12	54	Malta	F	18	64	Rhodes	C	17	63
Algiers	C	17	63	Edinburgh	F	10	50	Manchester	C	7	45	Rio de Jo	F	18	64
Amsterdam	F	9	48	Faro	-	-	-	Manila	F	35	95	Rome	S	17	63
Athens	F	17	63	Florence	S	17	63	Melbourne	S	27	81	Salzburg	F	10	50
Bahrain	C	23	73	Frankfurt	C	9	48	Mexico City	F	25	77	San Francisco	C	13	55
Bangkok	F	34	93	Funchal	F	17	63	Miami	S	23	73	Seoul	S	8	46
Barcelona	S	17	63	Geneva	R	8	46	Milan	[illegible]	14	57	Singapore	R	27	81
Beirut	F	20	68	Gibraltar	S	19	66	Montreal	C	-7	19	Stockholm	C	1	34
Belfast	R	9	48	Glasgow	C	8	46	Moscow	F	2	36	Strasbourg	C	10	50
Belgrade	R	7	45	Guernsey	F	10	50	Munich	R	7	45	Sydney	C	21	70
Berlin	C	3	37	Helsinki	Sn	1	34	Nairobi	F	29	84	Taipei	C	18	64
Biarritz	C	13	55	H Kong	C	17	63	Naples	F	16	61	Tangier	F	17	63
Bombay	S	29	84	Innsbruck	C	9	48	Nassau	S	24	75	Tel Aviv	F	17	63
Bordeaux	C	13	55	Inverness	C	8	46	New Delhi	S	28	82	Tenerife	S	21	70
Brussels	R	9	48	Islamabad	F	12	54	New York	S	3	37	Tokyo	C	17	63
Budapest	R	9	48	Istanbul	F	14	57	Nice	S	16	61	Toronto	C	-1	30
B Aires	C	22	72	Jakarta	R	31	88	Nicosia	F	17	63	Tunis	F	18	64
Cairo	S	21	70	Jersey	C	11	52	Oporto	-	-	-	Valencia	S	23	73
Cape Town	S	25	77	Jo'burg	F	26	79	Oslo	Sn	2	36	Venice	S	14	57
Caracas	C	27	81	Lima	S	26	79	Paris	C	12	54	Vienna	F	11	52
Casablanca	F	18	64	Lisbon	S	16	61	Peking	S	8	46	Warsaw	C	1	34
Chicago	S	10	50	London	F	11	52	Prague	F	8	46	Washington	S	6	43
Cologne	R	10	50	Los Angeles	S	18	64	Reykjavik	C	6	43	Zurich	R	6	43
Copenhagen	S	3	37	Luxembourg	C	7	45								
Corfu	C	15	59	Madrid	S	18	64								
Dallas	-	-	-	Majorca	S	20	68								
Dublin	F	10	50	Malaga	F	24	75								

Readings at mid-day yesterday

C-Cloudy D-Drizzle F-Fair Fg-Fog H-Hail R-Rain S-Sun Sl-Sleet Sn-Snow T-Thunder

US banks balk at securities bill

BY JANET BUSH IN NEW YORK

The US House Banking Committee yesterday published proposed legislation which would give banks some access to securities business but far more restricted powers than those suggested in rival legislation tabled by the Senate Banking Committee.

The bill would allow banks to underwrite and deal in commercial paper, municipal revenue *bonds* and *asset-backed* securities, including mortgage-backed securities.

It would not, however, allow banks to underwrite corporate debt, equity and mutual funds.

US banks are currently barred from any *of these activities under* the 1933 Glass-Steagall Act which strictly separates the business of banks and securities houses and which most regulatory agencies, including the US Federal Reserve, want repealed.

The bill published yesterday is sponsored by Congressman Fernand St Germain, Chairman of the House Banking Committee, and Congressman Chalmars Wylie, the ranking minority member of the committee.

Described by one person close to the legislative process as "the banks' worst nightmare", it constitutes only a limited modification to the act rather than repeal.

In contrast, the bill sponsored by Senator William Proxmire and approved by the Senate Banking Committee earlier this month would, step-by-step, dismantle the existing barriers.

After intense negotiations, the Senate committee *came up with a* compromise which would allow banks to start underwriting corporate debt issues and mutual *funds* six months after the legislation were enacted.

Congress would then bs required to vote in 1991 on whether banks should be allowed to underwrite corporate equities.

If the Proxmire bill were to be passed by the Senate and the St Germain-Wylie bill passed by the House of Representatives, a conference would have to be called to work out a compromise version for Congress to enact.

Many in Washington think this situation is quite likely and express the view that the hard-line nature of the House Banking bill *is meant to give Mr St Germain* a strong negotiating position in any conference.

The proposals published yesterday make provisions for significant "firewalls", separating a bank from its securities affiliate, and include a clause which would impose "suhstantial civil and criminal penalties" for violations of firewall provisions.

The bill also includes a clause prohibiting the 35 largest bank holding companies and securities firms from merging and proposed regulations barring a bank and its securities affiliates from sharing the same name or logo, the same location and advertising.

It would, if passed, prevent any subsidiary of a bank holding company, including a banking subsidiary, from engaging in insurance activities with certain exceptions.

It would also prohibit federal bank regulators from expanding banks' powers to act as property agents.

The *St German-Wylie* proposals will probably receive their first hearing in the House Banking Committee next week or after the Easter Recess which runs from April 1 to 10.

Opec calls for talks on cuts

Continued from Page 1

cut from some members of the oil cartel and from non-Opec producers to *bolster prices towards* Opec's $18 official level.

Seven non-Opec producers in particular have been suggesting that the cartel join them in reducing output by a total of up to 1.5m barrels a day.

Mr Mehdi Varzi, analyst with UK stock brokers, Kleinwort Grieveson, said there was no need for cuts on this scale, since Opec had already reduced production significantly this year.

THE LEX COLUMN

Abbey gets the greedy habit

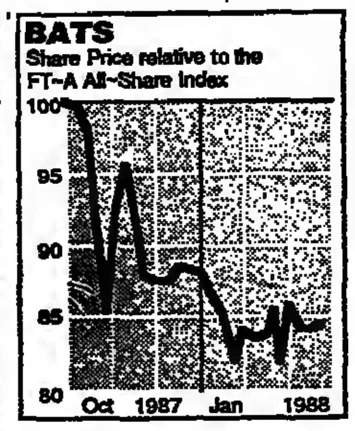
Abbey National, Britain's most profitable building society, has stepped onto the launch pad for a public flotation, and a very fine sight it makes. With £26.4bn of assets it has a bigger UK business than all but NatWest and Barclays: its stock market capitalisation *should* put it on a par with Lloyds and Midland: and as could be expected from a building society, it boasts as clean a balance sheet as any of the world's top 100 banks. Tha only problem is that it might fall into the same trap as the TSB Group, which went public in 1986, raised far more money than it needed, and promptly spent it on buying over-priced marchant banks, fund *management companies* and the like, with tha result that its shares have performed miserably ever since.

Abbey National is *surprisingly* confident that it will not make the same mistake. Whereas the TSB was owned by nobody and *had to raise very substantial* sums in order to dilnte the bonanza effect to first time shareholders who gained the benefit of its *£874m of pre-flotation net tangible* assets, Abbey's £1.1bn of reserves are quite clearly owned hy its 6m customers. The *simplest, and most* honest course, would be for Abbey to provide its customers with shares via a scrip issue and forget any ideas about *raising extra capital. Unfortunately*, Abbey is unlikely to pass up such a golden opportunity to tap the capital markets.

The official reason is that it will need the extra cash to "meet the future needs of our members", but the real reason probably is that it does not want to give away the society to its owners without reaping some extra benefits. Assuming that Abbey commands a stock market capitalisation of £2bn, these benefits are far from inconsequential.

BAT Industries

Perhaps the market is not so stupid after all. Back in 1984, it *was thought ridiculous* that BAT's shares should trade at a third of the average market multiple. Since then, corporate sector *earnings have enjoyed* a remarkable period of sustained growth, but BAT's 1987 profits and earnings are still down on their 1984 peak. *Sterling has risen in* the period from $1.18 to $1.88, and the combination of currency and the October crash knocked £300m off *last year's profits total;* but other ovarseas earners have grown despite sterling, and the crash did less harm to the profits of *insurers who do not subscribe to* the Eagle Star treatment of unrealised gains.



Provided the dollar does not end this year materially higher than last, the period of flat earnings should finally be over. As to dividends, BAT can justly point to cash flow rather than earnings as the source of growth, exemplified by the 18 per cent rise in payout announced yesterday; though the Farmers deal, should it go through at the current offer price, would acconnt for more than three years' cash flow.

At 464p, and assuming profits *this year of just under £1.6bn, the* p/e is now a third below the market average. The true BAT enthusiast will say the stock deserves a *market rating, but it seems safe* to rule that out for the near future on grounds of currency exposure and the threat of product *liability on tobacco*. The question, as always, is how big the discount should be; if Farmers is secured and sterling stays stable, it might narrow to 25 per cent or so, but might be hard pushed to go further.

Woolworth

The Woolworth share price has outperformed Dixons by 80 per cent since the crash, and yesterday's results told why. While Dix*ons has blamed the economy for* its troubles, Comet has quietly demonstrated that progress is possible even in a market that is *overstocked and crying out* for new products. Although Dixons, which entered the downturn ready for expansion, was naturally going to be the worse affected of the two, Comet's experience suggests that much of Dixons difficulties are of its own *making*.

However, Woolworth's results were not an outright triumph for the team that fought off Dixons last year. Indeed the company must regret having made such a fuss about the "Focus" scheme for FW Woolworth, as the volume growth hoped for then is not *coming through*. While the present strategy of shrinking FWW to redeploy space more profitably elsewhere makes much better sense, it is also a humiliating climb-down.

Meanwhile, it may be no coincidence that Woolworth, one of *the more defensive companies in* the sector, is so outspoken about the tougher times ahead for all retailers. Not only are paints, *shampoos and sweets* fairly well protected from the dreaded "wealth effect", but Woolworth's relatively low expenditure on *refurbishment should leave it* with a lowish cost base when the consumer spending boom ends.

In all, the 9p fall in the shares to 285p *yesterday seemed a little* harsh. Perhaps the purists were offended hy the treatment of the £5m cost of putting Superdrug *into Woolworth stores* as exceptional. But as an equally good case can be made either way, Woolworth should not be chastised, *especially as other retailers* would do well to copy its clean accounting policies.

Brierley Investments

Sir Ron Brierley may be enjoying himself hugely tweaking the tail of Mr Robert Holmes à Court over Bell Resources, but in the *meantime* the business of searching for undervalued assets goes on apace. In the event, Sir Ron did not have to look far for his *latest $1.2bn bid target:* CalMat was already 19 per cent owned by Industrial Equity (Pacific) Ltd, whose parent is Brierley Invest*ments*. But *though* the *company* may be familiar to Sir Ron, his prowess at the US-style bid battle is so far untested; having cut his teeth *on contested* bids in the UK, he may wish to try them out in a tougher arena.

He does, of course, have plenty of company on the US aggregates bandwagon, which seems to gather speed by the day. But one can be forgiven for wondering whether Californian cement really holds all that much fascination for Sir Ron: the size of the bid, and the absence of detail over how it would be financed, may suggest that he is more interested in a quick turn than in *owning a West Coast* gravel pit.

INTERNATIONAL APPOINTMENTS

NYSE board of directors designates president

THE BOARD of directors of the New York Stock Exchange has designated Mr Richard A. Grasso as the next president and chief operating officer, and a member of the board.

Mr Grasso, 41, will be formally elected at the board's Juna 2 meeting. In this new role, he will report to Mr John J. Phelan Jr, NYSE chairman and chief executive officer. Mr Grasso is currently NYSE executive vice-president, capital markets, and a member of the Exchange's management committee.

He will succeed Mr Robert J. Birnbaum, who has been president and chief operating officer at the NYSE since 1985 and will remain in office until the end of May when his contract expires.

Having served for eight years prior to 1985 in the same posts at the American Stock Exchange (Amex), Mr Birnbaum said that he is now interested in pursuing other interests and opportunities. He expects to join the boards of several corporations, and is discussing an association with a major law firm.

Mr Phelan said: "Bob Birnbaum has been a valuable asset to the New York Stock Exchange during one of the most turbulent periods in its history. His many years of experience in operations and extensive knowledge of securities industry issues contributed significantly to the NYSE's ability to operate smoothly and efficiently during the October market crisis."

Before joining the Amex in 1967, Mr Birnbaum had been branch chief of regulation and inspection with the Washington, D.C., office of the Securities and Exchange Commission. At the SEC, he also served as attorney on the staff of the special study on securities markets.

In June, Mr Grasso will assume responsibility for the operation of the NYSE's seven lines of business – equities, bonds, options, futures, market data, regulation and automation services.

He will oversee operations of the New York Futures Exchange, and remain a director of the Securities Industry Automation Corporation, a joint venture owned two-thirds by the NYSE and one-third by the Amex.

During 20 years with the NYSE, Mr Grasso was promoted to various executive posts before being made executive vice-president, capital markets in 1986.

"Dick Grasso has a wealth of experience in the securities industry, and a first-hand working knowledge of all aspects of our operations," Mr Phelan said. "He has been instrumental in the development and implementation of the NYSE's automated trade and communications systems. He is now responsible for the upgrade of these systems to enable the NYSE to manage volume of 600m shares a day by June this year as efficiently as it can currently process 225m.

"At this critical juncture in our history, as we move towards being able to handle peak demand of 1bn shares a day, it is imperative that the president and chief operating officer of the NYSE be thoroughly familiar with these systems," he added.

Pan Am names financial chief

PAN AM, the financially troubled US international airline holding company, has appointed Mr Richard H. Francis senior vice-president and chief financial officer, a post not filled for several years.

Mr Francis, 55, will hold the same positions at the company's Pan American World Airways subsidiary. He was most recently senior vice-president and chief financial officer of American Standard, the US plumbing fixtures group which last week announced a $2.5bn leveraged buyout of AS and has been resisting a Black and Decker bid. He joined a unit of AS in 1960 as an insurance manager.

Pan Am named Mr Peter McHugh senior vice-president of marketing. He was president of Trans World Airlines' TWA Travel Channel, and had previously been senior vice-president, marketing and sales at TWA.

Japan Air Lines to fill vacant post of chairman

TOKIO MARINE and Fire Insurance chairman Mr Fumio Watanabe has been designated for the chairmanship of Japan Air Lines (JAL), the national flag carrier, a JAL spokesman said, filling a post that has been left vacant since March 31 last year, reports Reuter.

Mr Watanabe's appointment is expected to be approved at a JAL general meeting of shareholders in June, at which time he will resign his position as chairman of Tokio Marine and Fire, the spokesman added.

Mr Junji Ito, JAL's previous chairman, resigned last March after some of his attempts to restructure the company to prepare for full privatisation met with opposition from within JAL, parts of Japan's ruling Liberal Democratic Party and the Ministry of Transport, JAL sources said.

On last November 18, legislation rescinding the Japan Air Lines Law, which had given the Japanese Government considerable control over the company, became effective.

On December 17, the Government sold its 34.5 per cent holding in JAL, making it a fully private company.

Leadership changes at Litton Industries

CHANGES IN the leadership of Litton Industries, a technology-based US company providing advanced electronic and defence systems, industrial automation systems and geophysical services to world markets, are planned for the end of this month.

Mr Fred W. O'Green, 66, intends to announce his retirement as chairman at the company's regular board meeting on March 31, but will continue as a member of the board of directors and of its executive committee.

Also at the meeting, the board plans to elect: Mr Orion L. Hoch as chairman; Mr Roland O. Peterson as president, chief operating officer and a director; and Mr Joseph T. Casey as vice-chairman, a new position, and chief financial officer.

Mr Hoch, 59, is currently president and chief executive officer, and will retain the latter responsibility. Mr Peterson, 56, is a Litton senior vice-president, while Mr Casey, 56, is an executive vice-president and chief financial officer. Both Mr Hoch and Mr Casey are members of the board's executive committee.

Mr O'Green has been chairman since 1981, and was chief executive from 1981 to 1986. He joined Litton in 1962 and held various executive posts before being elected president and chief operating officer in 1972.

Mr Hoch began his Litton career in 1957, and by 1973 had climbed to the post of deputy head of its business systems and equipment group. He left the company in 1974 to take a presidential post elsewhere, bnt returned to Litton in 1982 as president, chief operating officer and a director.

Mr Peterson has been group executive for Litton's components and industrial products group for the past two years. He joined Litton in 1960 as a project engineer. He had risen to a corporate senior vice-president by 1982, and he became group executive of the navigation, guidance and control systems group from 1983 to 1986.

Mr Casey joined Litton as corporate controller in 1963. He has been chief financial officer since 1967 and executive vice-president since 1976. He was elected to the board in 1981.

* * *

FIRST CHICAGO, parent of First National Bank of Chicago, the 11th-largest US bank, has reshuffled executive responsibilities at its Global Corporate Bank unit following the resignation of Mr William Moeller, former head of the unit's North American Banking Group.

Mr Leo Mullin is the replacement for Mr Moeller, who has left after seven years with First Chicago to join Southeast Bank, in Florida.

Mr Alan Delp, after heading the Global Corporate Bank's Asia/Pacific division, has been named as successor to Mr Mullin as chief of the International Banking Group sector.

FINANCIAL ACCOUNTANT, TO £30K

OPPORTUNITY IN INTERNATIONAL BANKING

The opening of a full international banking branch in the City only three weeks ago, has strengthened the strong links between the business and banking communities of the UK and Norway.

We now need additional members for our small, dedicated London-based team. The first will be an articulate and ambitious young graduate chartered accountant, with 3+ years' post-qualification experience to assume day-to-day management responsibility for the Accounts Department, with tasks ranging from statutory reporting, loans administration and financial accounting to monitoring position limits.

This role offers good prospects for personal and professional development in pace with the expansion of the branch, the challenge of being part of a major business initiative from the very beginning, and the opportunity to work in an environment where individual initiative is both encouraged – and well rewarded.

Remuneration will include a starting salary of up to £30k, together with the full range of benefits you would expect from a full-service international bank that is the central clearing bank for Norway's savings banks with access to a large retail base. This will include a company car, BUPA, subsidised mortgage and non-contributory pension scheme.

To arrange an interview please write in the first instance, with full CV, to John Coxon, Financial Controller, Union Bank of Norway, 20 St Swithin's Lane, London EC4N 8AD.

Union Bank of Norway

Accountancy Appointments

GROUP FINANCIAL CONTROLLER

Midlands c.£35,000 plus car

Our client, a major plc, controls a group of companies in the UK, Europe and North America producing and manufacturing a range of products associated with the construction and allied industries. It is expanding steadily and profitably, with largely autonomous subsidiaries operating under the control of a small head office.

The Group Finance Director wishes to recruit a Financial Controller who will have day-to-day operational control of the central finance function. This unit co-ordinates, consolidates, reviews and controls the quality and timeliness of financial reporting worldwide, handles tax matters and acts as coordinator of group funding. Systems are computerised and there is a small staff.

Candidates must be mature qualified accountants, preferably graduate chartered, with experience of operating at the centre of a diverse, widespread group. This is a challenging role, requiring the ability to achieve results and the potential to develop with the group. The post offers a good range of corporate benefits.

Please write in confidence with full career and salary details, quoting reference S7927 to John W. Hills.

KPMG Peat Marwick McLintock

Executive Selection and Search
9 Creed Lane, London, EC4V 5BR

Director Group Financial Services

c £40-£45,000 + car
Central London

Operating within the service sector, this UK public company has an outstanding record of growth and profitability. With turnover in excess of £100 million, worldwide operations outside the UK account for nearly half its business. Growth plans continue to be ambitious and it is now necessary to strengthen and reorganise the finance function to support this growth effectively.

Reporting to the Group Finance Director, the appointment will carry responsibility for the control and management of a sizeable department covering statutory consolidations, treasury, financial and management accounting and development of appropriate computer systems. Excellent accounting skills are required, but these must be accompanied by the right personal skills to direct and motivate the whole accounts department and to interact productively with senior management in the various operating companies.

Candidates will be qualified accountants (preferably chartered) with extensive experience in a senior finance role.

The compensation package will include normal big company benefits and will reflect the level of this appointment.

Please send a comprehensive CV in confidence quoting reference MCS/6122 to Alannah Hunt
Executive Selection Division
Price Waterhouse
Management Consultants
No. 1 London Bridge
London SE1 9QL

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Head of Accounting & Administration

Investment Banking
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£30 – 35k • Bonus • Car
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Our client, the subsidiary of a major international group, operates in the field of investment banking. Specialising in the European Equities Market, the organisation is sustaining impressive growth in the U.K.

To support this expansion the company is now seeking a young, ambitious and self-motivated graduate Accountant to organise and assume responsibility for its key accounting and administrative functions.

Candidates should have 5 years' post qualifying, hands-on experience in an accounting function as well as practical experience of P.C.'s and 4GL applications. Above all, our client is looking for a strong intellect, proven numerical and analytical skills together with an innovative mind.

This role offers an outstanding opportunity of working close to the business and future career progressinn wnuld be into the general management nf the organisation. The culture is such that achievements will be recognised and your potential developed to its full.

Applications, in the form of detailed C.V.'s, should be sent in confidence to: John Maxted, Digby Moore Associates, Mountbatten House, Victoria Street, Windsor, Berks SL4 1HE.

DIGBY MOORE ASSOCIATES
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GROUP CHIEF ACCOUNTANT

Merchanting/Wholesaling Background

S.E. Coast £27,000-£35,000+attractive benefits

The UK's growing reputation for highly efficient distributive companies is typified by our client. It has a continually developing network of local trading units which all operate as profit centres supported by group marketing and purchasing. This operating structure sustains a long established business practice of providing s local and efficient source of supply of e very extensive product range. It has also served to generate good margins. Organic growth has been rapid over the last five years and 1988's turnover will be c.£50 million.

In this Company, the Group Chief Accountant is expected to make a significant commercial contribution; input to business planning, overseeing and planning for the group's working capital and cash flow requirements, and enabling the group to make rapid business decisions by timely presentation of management information. Other key areas will include monitoring operational management's use of information provided and the standards of financial reporting to the group.

Your application is invited if you are a professionally qualified accountant with a breadth of commercially orientated financial management experience in medium to large merchanting/wholesaling enterprises. You should be seeking to develop your career in a company characterised by its commercial acumen, reputation for efficient customer service, strongly participative management style and firm commitment to future growth.

The remuneration package will include attractive pension arrangements, a company car and relocation assistance to the vicinity of an attractive resort on the South East Coast.

Please write in confidence with full career and salary details, quoting reference B8435/L to Mike Blanckenhagen.

KPMG Peat Marwick McLintock

Executive Selection and Search
9 Creed Lane, London EC4V 5BR

Finance Director

East Sussex

to £35,000 + car + share options

Our client, a leader in the design and distribution of furnishing fabrics, has a turnover of around £22 million and is currently preparing for flotation.

The Finance Director who is now being sought will work closely with the Managing Director in preparing the company for flotation and the expansion of the business. There will also be a strong emphasis on the improvement and development of management information and the computerised systems.

Applicants, preferably aged around 35, should be Qualified Accountants with commercial experience in a distribution business. Experience of staff and computer development is essential as is some degree of general management involvement.

Please send concise details, including current salary and daytime telephone number, quoting reference C0276, to: *David Fisher, Grant Thornton Management Consultants Limited, Grant Thornton House, Melton Street, Euston Square, London NW1 2EP.*

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European Financial Controller

(German speaking)

London **c.£35,000 + car**

Major division of quoted service based group seeks a Financial Controller to assume full functional responsibility for its European operations. Salary c.£30,000 plus substantial profit related bonus. Preferred age 30-40.

Candidates will be qualified accountants with successful experience of heading up the finance function in a significant profit centre in commerce or industry. Fluent conversational German is essential, as are high technical competence and the ability to deal effectively with senior management in Western Europe.

For a full job description, please write to W T Agar at John Courtis & Partners, 104 Marylebone Lane, London W1M 5FU, demonstrating your relevance clearly and quoting 2282/FT. Both men and women may apply.

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London, Milton Keynes, Wilmslow

ESSEX ACCOUNTANCY APPOINTMENTS

GROUP ACCOUNTANT/FINANCIAL DIRECTOR DESIGNATE **£25,000 + Benefit**

Young dynamic Qualified Accountant, with a minimum of 3 years post qualification (commarcial) experiance required by fast expanding private office products group, who ara 2/3 years from usm/stock exchanga flotation. Tha successful candidate will ba responaibla for the group accounts departmant, raporting to the Fineneial Director. Excellant promotion due in part to the Financial Directors own ambition.

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Finalist/Qualified Accountant experianced in producing budgats forecasts, cashflow etc required by a laeding company. for new and existing projects to be assisted by a financial analyst. The right applicant will have a minimum of 4 years experience within a commercial environment, including familiarity with computers. Future prospects excellent.

ACCOUNTANT **£18,000-£20,000**
Age: 35-50

An experienced Accountant required to run accounts department of UK subsidiary of intarnational company. Reporting to the Managing Director, the suitabla applicant must have sound computer experience and the confidence and ability to implement end develop e new system.

ASSISTANT ACCOUNTANT **£16,000**

Young ambitious Accountant, currantly moving towards qualification, required to report to Financial Controller in a Chemical Company. The successful applicant will be involved in all aspects of day to day operations and month end routines and will anticipate taking over from the Financial Controller, who will also be promoted in tha not too distant futura.

VENTHAM EMPLOYMENT LIMITED
SPECIALIST IN ACCOUNTANCY

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Chelmsford, Essex CM1 1BD
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You will have to demonstrate entrepreneurial flair and are likely to be a graduate, chartered accountant. Experience as financial director or cootroller of a business would be ideal. Previous iavolvement with acquisitions and fuod raisiog is partially relevant. Current data processing experience would be a useful bonus. Exceptional career achievement to date is more important than previous consultancy experience.

We want an achiever who is hungry for success, highly commercial, enjoys hard work, and a good communicator. The management style is entrepreneurial and demanding. A company car will be provided, and tangible results will be rewarded exceptionally well.

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JOHN SWIRE & SONS LIMITED

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The successful applicant will need to have some tax experience and the character, ability and perception to fit in effectively with a small head office team. Primarily a U.K. role, but with some exposure to the Group's international operations, the responsibilities cover with ad hoc projects, which could require some travel.

A competitive salary, commensurate with age and experience, plus a car is offered. The Company operates a subsidised mortgage scheme, a bonus scheme and provides excellent pension benefits.

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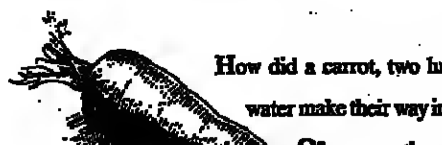

How did a carrot, two lumps of coal and a puddle of water make their way into the centre of a grassy field? Of course, the real question is, how do you approach problems of logic? At Peat Marwick McLintock the right answer is with lateral thinking, an inquisitive nature and cool logic. Because that's exactly what you'll need as a member of our Corporate Recovery practice.

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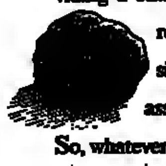
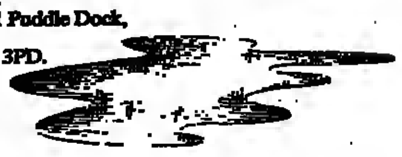


So, whatever your depth of experience – come and explore the prospects with us by writing with full c.v. to Tony McMahon, Peat Marwick McLintock, 1 Puddle Dock, Blackfriars, London EC4V 3PD.
Tel: 01-236 8000.



KPMG Peat Marwick McLintock

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For Newly Acquired Subsidiary

28-35 **Rural Oxfordshire**

Min. £40,000 package + car

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The group is currently completing the acquisition of a business of high potential that already has a turnover approaching £40m, operating from several manufacturing locations and headquartered in rural Oxfordshire. It has an easily identifiable product range which is targeted principally at the domestic market place and sold through the High Street.

However, with strong financial controls and a greater marketing input, the business could be developed substantially. It is within this environment that an opportunity has arisen for a high calibre Financial professional to come in at the start of the next vital stage of the company's history. This will enable you to stamp your authority, personality and expertise on an enterprise with exciting potential for escalating profitability and professionalism.

You will be required to reappraise comprehensively the financial and commercial disciplines, implementing sophisticated controls and setting ambitious new standards of performance. You will almost certainly need to strengthen your department with quality personnel. Working with the Managing Director, you will be a major contributor to the executive team, providing fresh input to day-to-day management, strategic planning and the long-term development of business.

You will be a talented, energetic, graduate qualified accountant, with a successful track record in industry or the profession. You will have excellent inter-personal skills, an assured manner and commercial flair.

The rewards are planned to match the considerable challenge of this position, while opportunities for further advancement are excellent.

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Reporting to the Managing Director the position requires a qualified accountant with a minimum of 5 years post qualification experience, gained within an affiliated industry.

Possessing excellent communication and man management skills combined with a broad based accounting background, and a proven track record in systems implementation and development, you will be an innovative professional ready to take the challenge offered by this highly demanding and diverse role.

Together with an attractive remuneration package our client offers outstanding opportunities at divisional and group level to an ambitious and highly motivated individual.

In the first instance please send a full career resumé including salary and a day time telephone number to: Linda McConville, Divisional Managing Director,

Robert Armstrong & Company
Management Selection Consultants
No.1 Central Street, Manchester M2 5WR.
Telephone: 061-236 0541
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Insurance Business Analyst

c.£23,000 + Mortgage Assistance

This is an opportunity for a recently qualified accountant with some experience of insurance to join the financial management team of the Insurance & Funds Management businesses of a large broadly based Financial Services Group.

The Business Analyst has an interesting and challenging role which includes responsibility for the review and analysis of strategic plans, financial plans and budgets; monitoring and review of actual parformance; analysis, control and review of capital projects; preparation of the relevant board papers and major ad hoc financial projects. There will be regular work in and close involvement with the insurance businesses and top level financial management at Headquarters. There are very good prospects of promotion throughout the Group.

Applicants should be young qualified accountants aged early to mid 20's, with the ambition to pursue a career in tha financial services sector. Experience of the insurance sector through audit or direct employment is required.

Location – City.

Please reply in confidence quoting Ref: L359 to:

Brian H Mason,
Mason & Nurse Associates,
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Tel: 01-240 7805

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You will initially report to the Departmental Director, reviewing and reporting on international operations and business activities. The group can also offer opportunities to work in the USA, including the Head Office in Dallas, Texas.

You should be a graduate, qualified Chartered Accountant, ideally with a working knowledge of European languages, and with strong technical and interpersonal skills. Excellent prospects are envisaged and a generous package includes 24 days holiday, fully-expensed travel, pension, BUPA and Life Assurance. Salary is substantial. Ref: C8681

For further details, please contact:
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Tel: 01 935 1493

CONFIDENTIAL

FINANCIAL CONTROLLER

South Herts. **c£25,000 + Car + Bonus +**

Our client, the U.K. subsidiary of a multi-national pharmaceutical organisation, currently seeks an accomplished accountant (probably in his/her 30's) with considerable experience gained in commerce/industry.

Primary duties will include the control of all financial and planning functions, with responsibility for a staff of 12. Reporting to the Managing Director, the successful applicant will be a member of the Policy Group, have strong systems development skills, some previous exposure to acquisition work and strategic planning as well as working knowledge of U.K. Corporation Tax procedures.

Outstanding benefits package.

For further details, please contact:
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[illegible]
Watford,
WD1 1EG
Tel: 09232 28332

Tudor Grange Properties PLC

GROUP ACCOUNTANT

W1 **c£24,000 + Benefits**

Recently established, this property development company has four major projects at development stage plus plans for 3,000 residential units over the next three years.

Currently seeking a Group Accountant, responsibilities include management and statutory accounts, supervision of staff and general administration of the accounts department.

This progressive role with immense potential for a Qualified Accountant, is suitable only for applicants welcoming a golden opportunity to join this young forward moving company whose present success ensures growth and expansion. Ref: SH/KB

For further details, please contact:
Accountancy Personnel,
43 Brompton Road,
Knightsbridge SW3 1DE
Tel: 01 581 5021

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COMPANY ACCOUNTANT

Central London **£22,000 + Car + Benefits**

This fast growing computer leasing subsidiary of a major British Bank seeks a young recently qualified accountant for its Head Office.

Responsibilities – Supervision of accounts department of seven, control of mini-computer based accounting system, preparation of monthly management accounts, annual accounts and group returns, with involvement in a number of administrative areas.

The successful candidate must be able to contribute to the efficient management and further development of the accounting function and to communicate effectively at all levels. Ref: KP/EC

For further details, please contact:
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8 Eastcheap,
London EC3M 1BN
Tel: 01 626 0666

Directing our success

Finance Director – £30,000 to £35,000 + Executive Car

This young and innovative company provides a credit card facility for customers of one of the largest retail groups in the industry – comprising a range of well known high street stores.

As part of the policy making team, you'll need the business acumen to make a major contribution to the future direction of the company. Commercially minded, highly credible and with excellent resource management skills, you will be at the head of Finance, Treasury and a large banking and voucher processing function.

Co-ordinating the production of detailed MIS, annual business plans and forecasts and other financial planning proposals, you'll need to be adept at controlling a process of on-going change, development and financial innovation, since your function has a dynamic influence on the commercial policies of the company. You must be PC literate, preferably with a background in banking, financial services or possibly a retail environment.

In addition to your salary and car, you will be offered an attractive benefits package appropriate to this level of appointment.

Please write with full CV to:
Tracey Collinge,
Juniper Woolf & Partners Limited,
22 New Concordia Wharf, Mill Street,
London SE1 2BB.

JUNIPER

SEARCH & SELECTION RECRUITMENT ADVERTISING

FINANCE DIRECTOR

North West England c. £28,000 plus car, plus bonus

Our client, an American owned engineering company, is a leader in its field with a high, worldwide reputation and considerable growth potential.

The finance director will report to both the UK managing director and the American parent on all financial performance matters and will be extensively involved with the board in general business development projects.

Preferred applicants will be qualified accountants who have held senior financial control positions within manufacturing industry. Prior experience of working for an American owned company will be beneficial as will extensive experience of developing an already highly computerised operation. It will be essential for the successful applicant to live in or relocate, with assistance, to the north west.

In the first instance, please send brief personal and career details, in confidence, to Douglas G Mitton quoting reference F/208/M.

Ernst & Whinney
Executive Recruitment Services
Becket House, 1 Lambeth Palace Road, London SE1 7EU

FINANCIAL CONTROLLER
LONDON NW
SALARY £18k neg.

The company is a member of a fast growing quoted group of companies engaged in business publishing, conferences, and communications, with a turnover of over £50 million.

Working closely with the Managing Director the Financial Controller will not have a number crunching role, but will be responsible for all aspects of financial control, participating in the management of the business, playing a full part in the senior executive team.

In particular the responsibilities will include:

financial management; commercial perspective, financial investigation and budgetary control, and responsibility for accounting requirements under the FSA.

Candidates should be recently qualified in a recognised accounting qualification, and preferable with experience in publishing and/or mail order.

If you believe you have the experience and drive required for this position please send your curriculum vitae, including your day time telephone number to:

Rosemary Grant, IBC Ltd,
56 Holborn Viaduct, London EC1A 2EX

RIYAD BANK

HEAD OFFICE - SAUDI ARABIA

COMPUTER INSPECTOR

The Riyad Bank, a leading Saudi Arabian Bank with a domestic network of 149 branches, is in the process of implementing new and sophisticated computer applications.

Distributed processing using local area networks of IBM PCs, linked via an SNA network to IBM 3090s running under MVS/XA, together with the extensive use of DB2, provides the technical environment into which we will be looking to recruit a Computer Inspector to augment our existing team. Operating within the Bank's Inspection Department, the successful candidate can expect to undertake a variety of projects ranging from the review of application developments and production systems through to detailed technical reviews of data centre operations and system software.

To be successful in this demanding role, candidates should have a sound technological background, preferably having spent a number of years in a systems development enviroment, and have a minimum of two years experience in a computer audit or a computer security role. Banking experience would be a definite advantage.

A fully competitive package, including free accomodation will be offered to the candidate with suitable qualifications, experience and adaptability.

Envelopes should be marked Computer Inspector and addressed to:
The Assistant General Manager (Personnel)
Riyad Bank, Head Office P.O.Box 12093
Jeddah-21431 Saudi Arabia

CHALLENGE MATCHED BY REWARD

FINANCE MANAGER

South West London **£25K + Car + Benefits**

With a turnover of £80 million, this FMCG organisation operates throughout the UK and is a subsidiary of one of Britain's foremost blue chip corporations. It has undergone substantial rejuvenation over the past 12 months and is an industry leader in its field.

Due to internal promotion, they are currently seeking to appoint a dynamic Finance Manager. Reporting at senior level you will be closely involved with the Board of the company and *inter alia* be responsible for:-

- **Systems and MIS enhancement**
- **Management of financial reporting including supervision of 26 staff**
- **Financial analysis and strategic planning**
- **Employee and organisational development**

This is a high profile position within a growth-orientated, multifaceted and progressive organisation. Accordingly, you will possess a first class track record, gained from industry or the profession, coupled with outstanding communicative skills and business acumen.

For the right candidate excellent career prospects will be available across the group as a whole. A highly competitive compensation package will comprise a salary of £25,000 and will be supported by the benefits to be expected from a major employer.

Interested applicants should send a full CV, quoting reference A115, to **Simon Hewitt or Mark Norton at Mervyn Hughes International Ltd.**, Management Recruitment Consultants, 63 Mansell Street, London E1 8AN. Telephone: 01-488 4114.

SPAIN

Top Spanish executive, fluent in Spanish, English, French and Italian. High social position Director Chamber of Commerce. Good knowledge and contacts with banks, industries, import-export, forwarding, distribution, etc. Seeks colaboration with first class firms specially at Madrid and Barcelona

Write to Box A0860, Financial Times, 10 Cannon Street, London EC4P 4BY

MANAGING GROWTH

Central London **£40K neg**

Our client is a relatively new fast-growing hi-tech company, with solid institutional backing, servicing a blue-chip client list world-wide. Profitable turnover is about £4M and growing. The Board now wishes to appoint its first qualified **Director of Finance & Administration.**

The successful candidate will be a computer-literate accountant, probably chartered and almost certainly a graduate, with overall business skills as well as a capacity for detail. Responsibility for the overall administrative management of the company is no less important than that of the financial management. Specific experience matters less than personal qualities – we seek a creative, but structured, enthusiast capable of making his or her mark in a high-powered team. Some international travel will be involved. Age probably mid-30s.

Salary negotiable around £40K, plus profit share. Car. Pension. Share option.

For further details and an application form please telephone Windsor (0753) 867175 (24 hrs) or write with full details to David Mackintosh, Director – Human Resources, 3i Consultants Ltd, 8 High Street, Windsor, Berks SL4 1LD quoting ref: DM/743.

3i Consultants Ltd
Human Resources

A WEALTH OF EXPERIENCE

Financial Accountant

Salary neg to £28,000 + car
North West

Girobank plc is an established UK Clearing Bank with a substantial growth record in both the corporate and personal banking markets. The bank has an annual income of £350m, total assets in the region of £1.7 billion and employs over 6,000 staff.

We are seeking to appoint a Financial Accountant to be responsible for the day to day financial accounting activities of the bank, both within its main processing centre at Bootle, Merseyside and its London based banking/treasury operation. Reporting to the Chief Accountant, major responsibilities include the production of both monthly and statutory financial accounts and Bank of England returns.

Candidates for this position will be qualified accountants (ACCA/ACA) preferably in their 30's who have gained several years experience of banking or the financial services sector.

They will have well developed management and technical skills combined with experience of sophisticated computer based accounting systems.

Commencing salary is negotiable to £28,000: further performance related salary progression is possible. Benefits are in keeping with the importance of this position. Assistance with relocation to within reasonable daily commuting distance of the Bootle base will be provided where necessary. The position requires frequent travel to London.

Please reply in writing outlining career, salary progression and how your skills and experience match the requirements of the job to: Paul Wildes, Management Appointments Manager, Girobank plc, Bridle Road, Bootle, Merseyside, GIR 0AA. Tel: 051-966 2230.

Girobank

Fast Track Senior Management Potential

HIGH PROFILE ROLE

Age 26 - 28 **Central London** **neg. c£26,000+ car + excel. ben.**

Our client, a well known major UK retail organisation, has achieved 12–30 % growth p.a. in each of the last 10 years. This rapid, continuing and profitable growth requires positive commitment and high level commercial skills from its senior management. The finance areas are particularly involved in the overall planning, development and control of this expansion in a market subject to constant change in consumer demands. Additionally, new technology, marketing methods and quality of service and products must be promptly and effectively incorporated.

A reorganisation and internal promotions have resulted in the need for an ambitious Qualified Accountant (ACA/ACCA/ACMA). The main objective of the immediate role (supported by a staff of 13, including several professional, qualified individuals) will be to enhance the provision of management information and advice. This will necessitate a clear understanding of large company business needs and systems (external or internal audit experience is essential).

Outstanding inter–personal and communication skills, excellent commercial acumen and strong leadership qualities are likewise imperative. Finally, as this is seen as a crucial development role, you must be capable of immediate interface with Senior Management and Directors. You must also have potential for significant promotion to the former level within 15 – 20 months.

If you can respond to both the short and medium term challenge of the role, telephone Karen Wilson on 01-491 3431 (or 0895 - 633 429 in the evenings) or write to her, enclosing a CV and note of remuneration package, at FMS, 14 Cork Street, London W1X 1PF.

FMS
Search and Selection Specialists
for
Financial Management

Investment Accountant

c £25,000 + Car + Subsidised Mortgage **Devon**

We are a diversifying financial services group with assets in excess of £1.5 billion. Following internal reorganisation, we are seeking to appoint a Manager who will be responsible to the Investment Director for providing a high quality service covering the accounting and administration functions which support our fund management and property investment activities.

You will manage a department of 32 and be involved with forward-planning, monitoring and control of staff and systems as well as acting as professional advisor where investment accounting and administration matters are concerned.

You will be a qualified accountant, computer literate and aged 30-45 years with experience in a comparable role within the financial services or securities industries.

This is a challenging appointment and the ideal move for an ambitious and highly-motivated self-starter who is prepared to make the job their own.

Benefits include a fully-expensed car, full relocation, private health care, share ownership, concessionary mortgage and pension schemes.

Please write with full C.V. showing details of current salary to Christine Killoran, Senior Personnel Officer, London and Manchester Group plc, Winslade Park, EXETER, EX5 1DS, or telephone her on (0392) 52155 for an application form.

London and Manchester Group plc

CURRENTLY AUDITIONING: AN INQUISITIVE YOUNG ACCOUNTANT TO MAKE SENSE OF MEDIA AND ENTERTAINMENT

Deloitte Haskins + Sells Media Group is a team of multi-disciplined professionals handling corporate finance, corporate and personal tax, audit and management consultancy for some of the country's leading organisations in broadcasting; cable/satellite TV; film and video production; newspaper, magazine and book publishing.

We're looking for a young graduate accountant with up to two years' post-qualification experience to join the Group as part of our growth and development. The role has four broad areas of responsibility:

- Implementing and contributing to the media group's strategy, and administering its budget.
- Supporting clients through research projects, technical advice, and liaison with corporate finance and consultancy.
- Preparing proposals and internal briefings, writing articles and other materials for internal and external publication.
- Developing - and presenting internal training courses, participating in external seminars and exhibitions.

This is a fascinating position to suit a young, enquiring mind. The right candidate will be articulate and self-motivated, have a proven ability to write and experience in public speaking. As you'd expect from one of the largest accounting and business advisory firms in the world, prospects for self-advancement are considerable.

Starting salary is negotiable around £20K plus benefits, which will reflect experience to date.

Write in the first instance to: George Eccles at Deloitte Haskins + Sells, 128 Queen Victoria Street, London EC4P 4JX

Deloitte Haskins+Sells

128 Queen Victoria Street, London EC4P 4JX.

...... profitable growth in manufacturing

Financial Director

Norfolk **£28,000 + Profit Share + Car + Relocation**

Our client, an expanding subsidiary of a prestigious acquisitive Plc, is poised for continued growth in a highly profitable manufacturing sector with sales in excess of £20 million.

We are seeking a financial director to join a strong management team, who, working closely with the Managing Director will have a substantial impact on maximising profit potential, through efficient business planning and strong financial control.

The successful candidate will be: a qualified accountant, aged 28-40; who must have a commercial attitude and be a confident, determined character, capable of implementing successful change in a manufacturing environment. A practical, 'shirt sleeves' approach will be essential, along with the ability to combine day-to-day involvement with a longer-term view.

If you are interested in this position and are prepared to commit yourself to the co itinued success of the company, then send yo ır curriculum vitae and daytime telephone number ɒ Jon Anderson ACMA, Executive Division, 39-41 Parker Street, London WC2B 5LH, quoting ref. 496.

Michael Page Partnership
International Recruitment Consultants
London Bristol Windsor St Albans Leatherhead Birmingham Nottingham Manchester Leeds Glasgow & Worldwide
A member of Addison Consultancy Group PLC

Fred. Olsen Limited

Chief Accountant

Ipswich **to £25,000 + fully expensed car + benefits**

Fred Olsen Limited is a privately owned diverse multinational organisation. The UK office, generating c£100 million turnover pa is relocating their operations from Central London to Ipswich and are therefore seeking a commercially minded and dynamic individual to manage their finance function.

The UK Company has commercial responsibility for a range of businesses including cruise holidays and property development as well as their more famous activities of ship and freight management.

Reporting to a local Finance Director responsibilities will include:

★ provision of financial/commercial advice to management/ Directors.
★ development of Accounting and Finance functions.
★ preparation of financial/management reports.
★ Tax accounting and planning.
★ development of all EDP based financial systems.
★ management of a large professional team.

Interested applicants should be qualified, aged 28-40 and be able to demonstrate a successful track record to date, including staff responsibility, ideally within a multinational environment. Excellent interpersonal skills, computer literacy and the ability to contribute to the business will also be required.

A highly competitive benefits package is available including relocation assistance where applicable, staff travel discount and medical insurance as well as excellent career prospects. (Interviews can be held in either London or Ipswich).

For further details please contact **John Zafar** on 0727 65813 or write to him at Michael Page Partnership, Centurion House, 136-142 London Road, St Albans, Herts, AL1 1SA.

Michael Page Partnership
International Recruitment Consultants
London Bristol Windsor St Albans Leatherhead Birmingham Nottingham Manchester Leeds Glasgow & Worldwide
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Corporate Treasurer

Thames Valley **up to £45,000 (inc. bonus) plus car**

Our clients are a *£1 billion* plus Group in a modern *"high-tech" industry. Dominating* their *market sector* in the U.K. and with e significant overseas presence they are well placed to expand through the 1990's, both by organic growth and acquisition. The Treasurer reports to the Finance Director and is expected to adopt a pro-active commercially oriented role, managing a small department responsible for all aspects of central cash management including financing subsidiaires, foreign exchange transactions, funding acquisitions/capital expenditure and assesssing the treasury implications of internal reports and plans. With specialist support he or she will also have responsibility for the group tax function. Applicants must have had treasury experience at a senior level in a major *international* organisation and should have well-established relationships with the banking community. This experience will probably be supported by a relevant professional qualification and/or degree. Good communication and inter-personal skills are essential for the person appointed since he or she will be encouraged to make e creative contribution to the decision-making process rather than just provide a technical support service. Ref 1658/FT. Write or telephone for an application form or send full details (with a day time telephone number and current salary) to R.A. Phillips, ACIS, FCII, 2-5 Old Bond Street, London W1X 3TB. *Tel no: 01-493 0156 (24 hours).*

Phillips & Carpenter
Selection Consultants

Group Finance Director

Expanding Banking, Property & Investment Management Group

neg £45–55,000 + Car + Share Option

Our client is a vibrant financial services group based in Knightsbridge with a full Stock Exchange listing and a market capitalisation of around £30 million, actively managed by an experienced and highly-respected team of professionals.

The Company is growing both organically and by acquisition and is being developed as a broad-based investment banking group, acting as a principal and as agent, in the areas of:

- Banking and financial services (through its subsidiary, a licensed bank)
- Finance-led property activities
- Active management of strategic investments and development capital.

This appointment, reporting to the Group Managing Director, will have full responsibility for the financial management of the Group. Key tasks in this area include the continued development of tight financial reporting systems for the Group, its associates and clients. You will also participate in all management and commercial decisions effecting future growth and profitability and play a key role in the evaluation of new business opportunities.

You will be a Chartered Accountant, aged 35–45, of high technical ability, an excellent communicator and motivator, with strong business orientation, who has had both professional and commercial experience, the latter preferably in a modern and efficient group with either City connections or one which has been actively acquisitive. You will have the ambition and determination to make a major contribution to the development of this fast-growing company.

The salary package is negotiable, as indicated, including all usual benefits, not least of which is an executive share option scheme. Please write to Neil Wax, Consultant to the Company, or call him on 01-387 5400 for an initial confidential discussion. Financial Selection Services, Drayton House, Gordon Street, London WC1H 0AN.

financial SELECTION SERVICES
Executive Selection Division

UK TAX MANAGER

Bank of America, one of the world's largest banks, is seeking an experienced tax professional to join e small team in its London Tax Office. Responsibilities will include UK, and some European, tax planning, together with the handling of all UK tax compliance matters.

The ideal candidate will be a qualified ACA with at least four years of UK corporate experience, including a thorough knowledge of UK corporate tax procedures. Strong communication skills are essential, as the successful applicant will be responsible for advising Bank executives on the tax-effective structuring of proposed transactions, and for dealing effectively with the tax authorities on complex issues.

Opportunities for career development are excellent and e competitive salary will be augmented by an attractive benefits package, including company car and mortgage subsidy.

Write, with full personal, career and salary details to:– A. J. Tucker, UK Personnel Manager, Bank of America NT & SA, 25 Cannon Street, London EC4P 4HN.

Bank of America

GROUP FINANCIAL CONTROLLER SAUDI ARABIA

CIRCA £25K P.A. TAX FREE

A major Saudi investment holding company with a wide spectrum of diversified interests requires a Financial Controller reporting to the Senior Vice-President. The duties will include the preparation of Group consolidated financial statements, monitoring the application and adherence to accounting and financial policies in the subsidiaries and affiliates of the Group, and preparing internal financial reports.

Applicants should be qualified Chartered Accountants from an accredited professional body in the UK or North America, with at least five years experience in a similar position with a reputable and diversified holding company; and should be familiar with computer-based accounting and information systems.

A University Degree is a distinct advantage, but not an essential requirement.

The position is based in Riyadh and may require occasional travel within Saudi Arabia.

The remuneration package will include a basic salary subject to negotiations, and fringe benefits including a general allowance, housing or housing allowance, medical insurance and air tickets to the place of original residence on annual vacations. Contract terms are for discussion. Write in confidence to;

O.R.S. Executive Recruitment (International) Ltd.
9 Leicester Street, Northwich, Cheshire, CW9 5LA.
Tel; 0606-48668. Fax; 0606-6840. Telex; 665411 ORSINT G

ORS executive

Management Accountant

... looking to progress

to £24K

A major British company, part of an international group, our clients manufacture and market sophisticated electronic and electro-mechanical products with e modern factory and headquarters in London. Important technical developments in the industry have created revolutionary new products calling for fresh initiatives in marketing, manufacture and finance.

You will be Divisional Controller reporting directly to the Finance Director and liaising closely with senior line management. A wide ranging role, responsible for the production and commercial accounts of e major division of the company, you will be managing e small team and using modern computerised systems.

This is an excellent opportunity for an experienced management accountant looking for his/her next step up the ladder. *You should be qualified ACMA or ACCA and be able to take on e key position within this substantial company going through* a vital stage of evolution.

An attractive salary is negotiable and benefits include pension and life assurance scheme, medical insurance and assistance with relocation if necessary.

Please apply with CV quoting ref: 366/3 to Chris Williams at Charles Barker MSI, 30 Farringdon Street, London EC4A 4EA. Tel: 01-634 1143.

CHARLES BARKER
SELECTION·SEARCH·ADVERTISING

Business Finance Manager

To £22,000 + car **Cheshire**

Our client is a major engineering company operating at the forefront of industry technology and with a turnover of c£300m. There are ambitious plans for further growth and to aid this process the company has re-structured to create discrete, autonomous business units.

Reporting to the Business Manager, you will be responsible for the financial performance and commercial development of a new £20m turnover business. Initial objectives will focus on developing financial systems and controls to assist management decision making. There will be continuing involvement in both short and long term financial planning and investment analysis. In addition, you will have a major role to play in contract evaluation, pricing policy and monitoring of results.

Candidates will be qualified accountants aged 26-35. Experience will have been gained in a contract or project engineering environment with significant exposure to manufacturing control systems. In this new post, you will be working in a dynamic environment and you must be able to *manage change effectively. You will possess confidence in* your own abilities, enthusiasm and a desire to use this experience for further career progression.

Please reply in confidence, giving concise career, personal and salary details to:- Brendan Keelan, Ref ER969 Arthur Young Corporate Resourcing, Citadel House, 5-11 Fetter Lane, London EC4A 1DH

Arthur Young Corporate Resourcing
A MEMBER OF ARTHUR YOUNG INTERNATIONAL

Venture and Development Capital.

Gartmore is seeking to recruit two executives to join Michael Walton in the formation of a venture capital team.

A Senior Executive

You will have worked for at least three years in the venture capital industry, and are now in a position of responsibility involving all stages of the investment process and aftercare. You are unlikely to be aged under thirty, and should be capable of becoming a key participant in the development of the business.

A Junior Executive

Probably a qualified accountant or a business graduate, with experience of investigations and company appraisals, preferably including the acquisition and disposal of small and medium sized companies.

Funds under Gartmore management already have significant involvement in unlisted investments, and Gartmore is seeking to consolidate and expand its venture capital capability.

This is an outstanding opportunity to join a small team and to help create a new force in this expanding business.

Please send full personal and career details to:- Director of Personnel, Gartmore Investment Management Ltd, P.O. Box 65, 16-18 Monument Street, London EC3R 8QQ.

Gartmore

APPOINTMENTS ADVERTISING

For Further Information Call 01-248 8000

Tessa Taylor ext 3351

Deirdre Venables ext 4177

Patrick Williams ext 3694

Elizabeth Rowan ext 3456

Paul Maraviglia ext 4676

FINANCE DIRECTOR

£24,000 + Car
Cambs.

The subsidiary of an aggressive and acquisitive quoted group, this small hi-tech company has a remarkable record of growth. The development of overseas markets has created *excellent opportunities for the unit*, and has led to a requirement for a full-time Finance Director.

Taking overall control of the finance function with 4 staff, the role controls group reporting, management accounting, forecasting, budgeting, cashflow control and systems development. Input to strategic issues will be an integral part of the position, working closely with the Managing Director to determine the commercial direction of the company.

An excellent opportunity for a qualified Accountant, 25-35, with a "hands-on" approach.

CHIEF ACCOUNTANT

£24,000 + Car
Suffolk

As part of its succession planning one of the world's major multinationals require a Chief Accountant for a £50m turnover electronics division based in Suffolk.

Reporting to the Divisional Financial Controller the position carries responsibility for all financial and management accounting, the development of financial systems and participation in the planning process.

Candidates will be qualified Accountants (28-34) who have gained a wide range of experience within a manufacturing environment and who have had significant exposure to mainframe and micro computers.

Initial enquiries to Joan Coulter at Robert Half, Freepost. *Walter House, Bedford Street*, 418 The Strand, London WC2R 0BR. Telephone: 01-836 3545.

Financial Recruitment Specialists
London · Birmingham · Windsor · Manchester

ROBERT HALF

CHIEF ACCOUNTANT/ FINANCE DIRECTOR DESIGNATE:

This fast expanding aviation company, located near Stansted, is seeking a qualified accountant to head the finance function. The preferred applicant should have experience within the industry, be capable of supervising the processing of large volumes of business under time pressure and will assume executive responsibility for all financial matters. A Board appointment within twelve months is anticipated. Salary up to £27,500 + car.

Write to box A0866, Financial Times, 10 Cannon Street, London EC4P 4BY

FINANCIAL CONTROLLER

Mid-thirties
£30k plus

Our client, a £20m marketing-led engineering company manufacturing and trading internationally, has doubled its turnover over the last three years through organic growth, investment in product design and quality, high levels of service to clients and dynamic management. The average age of the Senior Management team is 40.

Candidates for the position of Financial Controller will not only be professionally qualified graduates with an excellent track record in financial management, but also businessmen or women of very high calibre. Experience of the manufacture and sale of capital equipment and of engineering contracting—preferably to Comecon and Third World markets—is desirable.

Salary is negotiable plus bonus. Location is a pleasant, historic provincial city.

Candidates please write, in confidence, giving details of age, experience, qualifications and present earnings, quoting Ref. 1023. Alternatively telephone John Pattison as adviser to the company on 0602 411238 (office) for a brief discussion. No information will be divulged to our client without your prior permission.

CB-Linnell Limited
7 College Street, Nottingham
MANAGEMENT SELECTION CONSULTANTS
NOTTINGHAM · LONDON

CONSIDER INFORMATION TECHNOLOGY

Qualified/PQ Accountants to £25k plus benefits

If you have ever considered switching from Accountancy into a potentially more challenging and lucrative profession – consider IT.

Our client has won a worldwide reputation for financial applications software on supermini technology and their turnover continues to double annually, as it has for the past 4 years.

This innovative turnkey systems house is determined to lead in the financial technology of the 90's and has invested in a strategy which involves attracting professionals with an ability to shape and develop this dynamic organisation.

A number of opportunities have been identified including positions in Project/Account Management, Consultancy, Sales & Training. Basic salaries range from £18k to £25k plus commission and benefits.

The key requirements are that you are either qualified or part qualified with experience of implementing financial information systems.

The decision is yours.

Contact, in complete confidence our Recruiting Consultant, Susan Wright during office hours on 01-935 8474, or, send a C.V. to her office address.
FAIRBANK & FRY MANAGEMENT CONSULTANTS LIMITED
64 George Street, London W1H 5RG.

Fairbank & Fry MANAGEMENT CONSULTANTS LIMITED

ACA GRADUATE

TRAINEES £9 - £10,500 + FULL STUDY PACKAGE. International to Small city/W1/Local CH/ACCTS. 10-13 "UCCA" points at "A" Levels & expect 1st/2,1/2.2 Degree. 1987 Graduates places to start Easter.

01-255-1555

Mike Morell, Meridian Rec Cons, 25, Museum St., WC1A 1JT

MANAGER-BUSINESS SERVICES

Reading
c£25,000 plus car

With a staff of 4,500 and over 30 offices throughout the United Kingdom, our client is one of the country's largest firms of chartered accountants and management consultants.

The provision of financial and commercial services to small businesses is one of its specialist areas, and the success of its Business Services Group in taking organisations from start-up to maturity is impressive.

In Reading, with a potential client base covering the Thames Valley, their record of achievement has made the team one of the most successful in the firm, and it's a position of strength from which you can build your own career.

The responsibilities will be considerable, covering management of the team as well as business development. This key appointment offers the chance for you to use your ACA and business acumen in the highly rewarding role of advisor to growing companies and, in doing so, widen your business and management expertise to the point at which it becomes a springboard to much greater challenges. Though probably still in your 20's, you will be an achiever for whom the transition to senior management will prove easy.

In addition to a salary in the region of £25,000, there will be an extensive range of benefits plus a company car.

For further details, please send your c.v., quoting reference CRS/521, to Jennie Pask, Lockyer, Bradshaw & Wilson Limited, 39-41 Parker Street, London WC2B 5LH.

Please indicate any organisations to which your details should not be forwarded.

LBW
LOCKYER, BRADSHAW & WILSON LIMITED
A member of the Addison Consultancy Group PLC

SRL EXECUTIVE

CHIEF FINANCIAL OFFICER

Full Functional Accountability
c£25,000 + car + profit share

Our client, part of a leading international group in the service sector, is an autonomous and expanding Company with a turnover approaching £10 million. Based in the City, future growth plans include developments in both central London and key regional centres.

In response to their growth, there is now an opportunity for an ambitious, highly motivated professional to assume full responsibility for the financial function and to play an active role in the profitable development of the Company's business.

Initial priorities will include the re-organisation of the accounting function and improvement/development of management information systems to meet the demands of a fast moving business.

The successful candidate will be a graduate chartered accountant, probably aged 26 to 33 years, with a track record of progressive achievement ideally gained in a service-based environment. Some experience of the development of computerised systems would be of advantage.

Personal qualities will include flexibility and enthusiasm coupled with an assertive yet tactful style and the ability to develop and motivate staff. You should be able to demonstrate an understanding of overall group concepts and possess the potential for personal career development including progression to Director status.

For further information, please telephone KEITH SCOTT on 01-993 6610 or write to him, enclosing full career details and salary progression date, at SRL Executive, Challenger House, Gunnersbury Lane, London W3 8LH (ref. M1053).

EDP-AUDIT MANAGER

Hertfordshire
to £30,000 + car + benefits

Distribution and leasing are the core business of this major British PLC, which operates internationally and currently has a T/O in excess of £1.4 billion. It has strong growth ambition and seeks to establish a predominant position in each of its markets through quality of service.

An exceptional opportunity has arisen to head-up a small established EDP-audit team. This key role requires you to plan and implement a complete EDP-audit programme for the group and this will involve reviewing a diverse range of installations based in the UK, the USA and Europe.

To be considered for this position, you will be aged 30-40, with at least 3-5 years' EDP-audit experience and an accounting or data-processing background. An element of consultancy work within the role will necessitate a proven ability to communicate your skills in both an oral and written format with all levels of management.

Interested applicants should write to the address below or telephone Lisa Pearson, Accountancy Division, quoting reference HG4710.

Telephone 0727 35116 (out of hours (0582) 404412)

Management Personnel, Eclipse Court, Half Moon Yard, 14b Chequer Street, St Albans, Herts AL1 3HH

Management Personnel
LONDON · GUILDFORD · ST. ALBANS · WINDSOR

Royal Life

Internal Audit In Financial Services

My client is a rapidly expanding subsidiary of Royal Insurance plc and is a leading force in the financial services sector, operating throughout the world. Continued success has created exciting career prospects within the Internal Audit team.

Audit Manager — *Up to £28,000, Car, Benefits*

Reporting to the Chief Internal Auditor, you will lead a team of 8 audit staff and be responsible for the planning, execution and quality control of audit assignments throughout the company. Aged 30-40, you will be a fully qualified Accountant with at least five years audit experience, preferably in the financial services sector, and two years management experience. *Ref: M19007/FT.*

Senior Internal Auditors — *Up to £20,000, Car, Benefits*

Reporting to the Audit Manager, you will be responsible for the successful completion of audit assignments within budgets and timescales. You will supervise 2-3 Internal Audit Assistants and play an important part in their future development. Aged 25-32, you will be a fully qualified Accountant with at least three years experience as an auditor. *Ref: M19008/FT.*

Based in the North West, both positions attract an impressive range of benefits including subsidised mortgage, non-contributory pension scheme, profit share and generous relocation expenses. Most importantly, if you have the high calibre profile we are seeking, my client offers opportunities to promote your career with an expanding international company.

My client is an equal opportunities employer.

Male or female candidates should submit in confidence a comprehensive c.v. or telephone for a Personal History Form to, *J. Morrison, Hoggett Bowers plc, St. James's Court, 30 Brown Street, MANCHESTER, M2 2JF, 061-832 3500, quoting the appropriate reference.*

Hoggett Bowers
Executive Search and Selection Consultants
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A MEMBER OF BLUE ARROW PLC

Appointments Advertising

Appears on Wednesday and Thursday

£47 s.c.c.

Premium Positions

£57 s.c.c.

GROUP FINANCIAL CONTROLLER

Northamptonshire
c. £25,000, Car, Benefits

This Group has a first class product range, which is a household name in its own field. It is well established, profitable and expanding, with plans for substantial further diversification and growth.

The Group Financial Controller will be responsible for all the accounting activities of the group, and for the centralised accounting function. You will also have some challenging systems development tasks, both within and outside the finance function.

You should be a qualified accountant with broad experience at a level of substantial responsibility within industry or commerce; but above all, we need a creative, enthusiastic professional who wants to make a mark in a key position in a quality company.

Ref 3327. Male or Female Candidates should telephone for an application form or forward a CV to: C W Theaker,
Sterling Search & Selection Limited,
130-134 High Street, Solihull,
West Midlands, B91 3SX,
Tel: 021-704 4334.

ST [redacted] G
SEARC [redacted] MITED

Senior VAT Consultant

London
Up to £40,000
plus car

VAT consultancy is the fastest growing part of our tax practice with exciting plans for further expansion. It's big business. For the Treasury it is a £26 billion business.

We now need to strengthen our team further by the appointment of additional VAT specialists at senior consultant level.

Based in London, you will be part of an expanding team of more than 30 specialists, providing comprehensive VAT consultancy services to clients from proprietorial businesses to multinational corporations.

The VAT team is part of our International Trade Group, a unique mix of highly skilled specialists who concentrate on providing top quality tax consultancy services to international business.

You are likely to be a chartered accountant with substantial VAT experience, gained as an audit or tax manager with a professional firm or large company. You could also be with HM Customs & Excise in Headquarters or with "999 large trader" experience particularly in the financial services sector.

You will have outstanding technical and management skills, the ability to communicate effectively with senior executives and a strong sense of business awareness. You are unlikely to be earning less than £25,000.

The work is demanding and involves continuous client contact. It concentrates on the interpretation and practical application of VAT law over a wide range of business transactions. These assignments require sound understanding of client business objectives and corporate strategy and involve the review of complex deals across the world.

Future prospects are outstanding and the rewards are highly competitive. A good relocation package is available.

Please telephone or write to:

John R Townend
National Tax Recruitment Manager
Price Waterhouse
Southwark Towers
32 London Bridge Street
London SE1 9SY
Tel: 01-407-8989

Price Waterhouse

Offices in: London, Aberdeen, Birmingham, Bristol, Cardiff, Edinburgh, Glasgow, Leeds, Leicester, Liverpool, Manchester, Middlesbrough, Newcastle, Nottingham, Southampton and Windsor. Associated firms in Ireland and the Channel Islands.

SAUDI ARABIA

A leading trading company in Jeddah requires two Qualified Accountants as follows:

1. CHIEF ACCOUNTANT

2. SENIOR INTERNAL CONTROL ACCOUNTANT

These positions call for recently qualified accountants (preferably C.A.) with good experience of computerised accounting and auditing. Reporting will be to the Financial Manager. An attractive salary is offered.

The Company imports and distributes a wide range of electrical goods in the air conditioning, refrigeration and domestic appliance fields, as well as electronic consumer goods.

Applications with full C.V. and telephone contact number should be sent as soon as possible to:

I. M. White Consultancy,
31 Danbury Vale, Danbury, Chelmsford,
Essex, CM3 4LA.

FINANCE AND ADMINISTRATION DIRECTOR

HIGH WYCOMBE — **£ EXCELLENT**

Our client is, a rapidly growing firm involved in the retailing of office furniture. To further the expected growth it has identified the need for this important new appointment.

The candidate will be expected to make a positive and imaginative contribution to the efficiency and profitability of the business. He or she will have responsibility for financial management and administration.

Candidates will probably be chartered accountants aged 28 - 40. They will have sound post-qualification experience in industry or commerce.

Please send a comprehensive C.V. including salary history to :-
J O English F.C.A., Clarks, Chartered Accountants
P O Box 150, Cippenham Court, Cippenham Lane,
SLOUGH, Berkshire SL1 5AT

St Michael®

Influence. Innovate. Inform.

Contribute to change in a £multi-billion environment.

Marks & Spencer is a major blue chip company whose investment in technology is considerable. This extends to the Finance Group at Head Office, where the following professionals will have an opportunity to influence change:

FINANCIAL ANALYST c.£25,000 + car

Working within a small, young and progressive team, your role will be to develop and implement a framework for determining and increasing the profitability of differing areas of the business. This will involve identifying key costs and influencing necessary change, putting you in close contact with people from all disciplines – both in Stores and Head Office.

You're a qualified accountant with at least 2 years' post qualification experience, ideally including D.P.P. You're also an excellent communicator with a forward looking approach.

COMPUTER AUDIT c.£25,000 + car

Working within a small team you will be involved at every stage of systems development projects. Your role will be to evaluate new systems, analyse problems and recommend solutions. This will give you exposure to a wide range of systems and computer products, and provide the opportunity for progression to other areas of our business.

Probably a qualified accountant, you should have at least 2 years' computer audit experience and the ability to influence change in a role offering considerable involvement.

FINANCIAL AUDIT c.£23,000 (Newly qualified)

You will be a key member of the team responsible for increasing profitability by conducting operational and systems based audits and by the review of new systems with Computer Audit. This will give you a high profile with both Financial and Commercial Managers and will provide opportunity for further progression.

A newly qualified accountant with good audit experience, you must be a strong man-manager, familiar with computer systems, and keen to stimulate progress.

Marks & Spencer's commitment to innovation means that these roles are ideal for creative and highly motivated self-starters. If you would like to gain more recognition by contributing to the process of change, please write with a full cv stating current salary to our advising Consultants: Richard Holland at Robert Half, Walter House, 418 The Strand, London WC2R 0PT. Or telephone 01-836 3545 (Office hours), 01-348 1173 (Evenings only).

We are an equal opportunities employer.

MARKS & SPENCER

YOUNG, HIGH-CALIBRE ACCOUNTANT
DEVELOPING RETAIL EXCELLENCE
c£20,000 + CAR + BENEFITS

We are the leading music retailer with over 60 stores throughout the UK. To provide a strong platform for our ambitious growth plans, we now wish to appoint a Financial Planning Accountant with energy and commitment to make a significant contribution to our exciting future activity.

Based in Oxford Street W1, you will be given real responsibility to shape the forecasting and budgeting process. This role will offer considerable scope to influence the direction of the business both on tactical and strategic levels. You will be expected to create and evaluate alternative courses of action. The successful candidate will need to possess the appropriate breadth of vision to capitalise on these *opportunities. Success in this position will lead to further career development in the Company or within the Group.*

You will be a qualified accountant with at least two years post qualification experience, possess well developed communication and influencing skills and enjoy working as a team member. You will have substantial experience of financial modelling and be able to apply the latest technology in pursuit of your objectives. This appointment will suit an ambitious accountant who can respond to the challenge of growth in a fast moving retail environment.

To apply, please write with full career details by no later than Tuesday April 5th to Stuart Hardey, Personnel and Training Manager, Film House, 142 Wardour Street, London W1V 3AU.

We welcome applications from both women and men.

HMV

The World's Best Music Stores.

A THORN EMI Company.

'In Fact . . . Potential Director Material'
FINANCE MANAGER

Northern Home Counties — *c.£25K + Generous Bonus + Car*

As part of a radical decentralisation programme, our Client (a major presence on the nation's high streets and part of one of the UK's largest and most prestigious commercial groups) now wishes to appoint a new MANAGER OF FINANCE. This move will be a critical step in their overall plan to strengthen the Regional management team.

The Finance Manager will immediately take charge of a small, well-established department. In addition to managing the company's financial affairs, however, she/he will also handle a number of administrative functions such as transport, property and all insurance matters.

Computer systems, both mainframe and mini/PC based, have broadly been established on ICL equipment, but a major change at group level to IBM hardware is currently in progress. The Finance Manager will, therefore, as part of her/his longer term business activities be expected to help develop and nurture further systems improvements.

Direct reporting will be to the Regional General Manager, with an indirect 'dotted line' reporting structure to the F.D. Full participation in the commercial decision making process at a senior level will be seen as an integral part of the role.

Candidates must be qualified accountants in the 28-35 age range, with a good knowledge of systems and a sound commercial background. A Business Management Degree would be an attractive bonus. Specific experience in retailing or a similar service industry would also be highly advantageous.

During our briefing, descriptions such as 'self-starter', 'pro-active', 'good listener', and 'outgoing' were used to highlight key features of the ideal applicant's personality. The main criteria for success that we will be looking for, however, will be a superb commercial acumen linked to managerial competence.

Candidates may apply in the first instance by calling our **Executive Express Line** during normal office hours and asking for our Managing Consultant — **Ron Irving**. The number is **01-937 5771** (also available **24 hours**). Alternatively you may choose to send your Curriculum Vitae direct to our London Office, marking the envelope **'Reference FM/WAT'**.

We look forward to hearing from you.

THE HAMILTON IRVING CONSULTANCY

CONSULTANTS IN HUMAN RESOURCES AND RECRUITMENT TO THE RETAIL INDUSTRY

London House, 26-40 Kensington High Street, London W8 4PF Telephone: 01-938 2222

Corporate Recovery Seniors
Exciting Opportunity For Talented ACA's

Manchester — £s Excellent

Our rapidly expanding Corporate Recovery and Insolvency Division covering the North West seeks young and ambitious Seniors to contribute to the next stage of the Division's development.

Reporting to Principal level, you will assume responsibility for a diverse range of corporate viability reviews and monitoring assignments as well as senior level exposure to company receiverships, administrations and liquidations.

Age range 25 to early 30s, you should have clear management potential in the *short term and the ambition to succeed in a busy and growth orientated* environment.

Interested candidates should send their full CV and current salary details in confidence to **Ken Chalk, Spicer & Oppenheim, Derby House, Booth Street, Manchester, M60 2ED.**

SPICER & OPPENHEIM

A MEMBER OF SPICER & OPPENHEIM INTERNATIONAL

APPOINTMENTS ADVERTISING

For further information call 01-248 8000

Tessa Taylor ext 3351

Deirdre Venables ext 4177

Paul Maraviglia ext 4676

Elizabeth Rowan ext 3456

Patrick Williams ext 3694

Financial Director Designate

Essex/London Borders

c. £30,000 + profit share and car

Our client is a highly successful medium-sized financial services/estate agency organisation with ambitious growth plans that are supported fully by the parent Plc.

This is a new appointment where the Finance Director Designate will be closely involved in developing strategic plans, detailed budgets and systems improvements so that the planned rapid growth can be achieved. There will also be the need to manage a small but growing existing accounts and administration department.

Applicants should be qualified accountants aged around 30 with recent experience of a service organisation gained possibly while in the accountancy profession. Some exposure gained in a commercial environment is an essential requirement.

A Board appointment is envisaged after about one year.

Please write to Michael Ping enclosing career details and current salary, quoting reference 1070/P, at Executive Selection Division, Grant Thornton Management Consultants Limited, Grant Thornton House, Melton Street, Euston Square, London NW1 2EP.

Grant Thornton

Management Consultants

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Hoggett Bowers

Executive Search and Selection Consultants

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A MEMBER OF BLUE ARROW PLC

Management Accountant

£200m Oil Exploration Business
Central London, Up to £24,000

The position involves a very broad range of management accounting activities, including preparation of monthly reports, co-ordination and consolidation of capital budgets, and major ad hoc reviews of specific capital and operating expenditure areas. The business is currently engaged in drilling 30 wells in Europe, plus c15 pre-drilling planning projects, with a total accounting team of 14. It is part of a well-known major oil company, renowned for its upstream activities, and with strong emphasis on good financial management. There are excellent career prospects. Broad experience of management accounting in an industrial/commercial environment is required. Applications are invited from candidates with accounting qualifications, or unqualified candidates with oil industry experience.
D. Venables, Hoggett Bowers plc, *1/2 Hanover Street,*
LONDON, *W1R 9WB*, 01-734 6852. *Ref: H15029/FT.*

Financial Managers

Opportunity for Top Accountants to Move into Retailing
Midlands, To £20,000, Car

A leading High Street Retailer has recently completed a major review of its organisation and identified the key positions necessary to meet its planned growth and future developments. In these high profile roles, as members of the finance team, you will work very closely with the senior Management of the Company. Responsibility will be for introducing effective forecasting and budgeting, assessing branch and product profitability and enhancing generally the quality of management information available, to aid proper control and highlight business opportunities. The requirement is for commercially minded qualified or exceptional part qualified accountants, probably aged 25-30, who have already been successful in a demanding fast moving environment. Familiarity with the development of sophisticated management information using micro-computers is essential, as are the personal qualities necessary to influence business decisions at the highest levels and secure rapid career progression either in finance or general management.
P.S. Worsley, Hoggett Bowers plc, *Castle House, 74 St. James's Street,*
NOTTINGHAM, *NG1 6FJ*, 0602-412019. *Ref: E13023/FT.*

These positions are open to male or female candidates. Please telephone for a Personal History Form to the relevant office, quoting the appropriate reference.

FINANCIAL CONTROLLER

Leicester **£20,000+Car+Bonus**

Circle K – one of the world's largest convenience store chains – has made a dramatic impact on the UK market since its arrival in 1986. As part of its impressive expansion plan, it operates a number of Area Franchises, the East Midlands Area trading under the name of Central Convenience Stores. This young and dynamic company is looking for a Financial Controller – in a similar mould – to help achieve its planned growth from six to one hundred stores within the next four years.

Reporting to the Finance Director, this is a front line accounting position where principal responsibilities will include preparation of monthly management accounts, monthly margin reports, weekly sales statistics and stock movements as well as the day to day running of an accounting department. In addition, you will be expected to contribute to the company's growth and success by your contribution as part of the senior decision making team.

You will be aged 25-35, a qualified Accountant with first class technical skills and experience of working to very tight timetables. A good working knowledge of IBM-PCs and of Lotus 1-2-3 models and spreadsheets is essential while some retail accounting experience would greatly shorten the learning curve. A positive personality, the ability to thrive under pressure, energy, enthusiasm, commitment and ambition are all pre-requisites for success.

This position offers the opportunity of contributing directly to the company's success and in so doing, to your own success and rapid promotion.

A salary of £20,000 p.a. is offered plus bonus and a fully expensed company car.

If this challenge excites you, then please write with full career details quoting reference L/100/88 to Morag Lloyd.

KPMG Peat Marwick McLintock

Executive Selection
Arlen House, Salisbury Road, Leicester LE1 7QS. (0533) 471122

MANAGING GROWTH

N. Leics **Excellent Package + Equity**

Millway Foods is a new company formed, with strong institutional backing, by a talented team which is particularly strong in sales and marketing. Millway has acquired the Harby cheese factory – manufacturing primarily Stilton but also territorial cheeses. The company is confidently looking to substantial growth and flotation. A Finance Director is now needed to complete the executive team.

We seek a computer-literate accountant (probably chartered) with, ideally, some experience of medium-sized companies, food products and/or the City. Specific experience is, however, less important than the ability to fit in to the ethos of the team and yet the individuality to bring something special to the party. He or she must have both the judgement to provide the Board with sound financial advice and the presence to represent the company in financial circles. Age is not a critical factor.

Salary negotiable. Car and all running costs. Assistance with relocation. Opportunity for equity participation after an appropriate qualifying period.

For further details and an application form please telephone Windsor (0753) 867175 (24 hrs) or write with full details and salary aspirations to David Mackintosh, Director – Human Resources, 3i Consultants Ltd, 8 High Street, Windsor, Berks, SL4 1LD quoting ref: DM/742

3i Consultants Ltd
Human Resources

A WEALTH OF EXPERIENCE

FINANCIAL DIRECTOR

(Designate)

NR.HEATHROW

c.£25,000 + car

Our client is a young, successful and rapidly expanding Company - manufacturers of a specialist range of consumer products.
Growth has created a challenging opportunity for a professional Qualified Accountant - preferred age 25-35 to join as FINANCE DIRECTOR and play a significant role in the development of the Company. This is a job demanding Total involvement - the Financial Director will be responsible for introducing Computerised Facilities - Controlling all Financial, Management and Cost Accounting, Inventory, Administrative and Legal matters together with providing a full supporting service to Sales and Production Management.
Turnover at present is £3M but this is expected to double in the next year - the Company has a sound client base and impressive marketing policies. Applicants should have experience of controlling an all round similar role in a small Company or rapid growth situation.

If this sounds like the challenge you are seeking - contact: -
ARTHUR FLITTER (Adviser to the Company)

Beaumont House,
Station Path,
STAINES,
Middx. TW18 4AL.
Telephone: Staines (0784) 62131 (8 Lines)

BEAUMONT MANAGEMENT SERVICES LTD.

Financial Appointments made easier

COLOROLL

Acquisitions/Corporate Finance

Coloroll - the fastest growing international home fashion group in the UK - with sales taken from £35m to approaching £300m in just 3 years.

If you would like the opportunity to join:–

one of the most exciting companies in the UK
a highly professional corporate finance team, and
a finely tuned post-acquisition management team,

then this is for you.

* Are you hungry for career success?
* Do you have strong analytical and quantitative skills?
* Are you 25-35 with a good first degree and/or an MBA?
* Would you thrive in a fast, dynamic, demanding environment?
* Are you prepared to make a substantial personal commitment to your employer?

If the answer to these questions is Yes, then write to *Mrs J Cull, Hoggett Bowers plc, St. James's Court, 30 Brown Street, MANCHESTER, M2 2JF, quoting reference M16025/FT.* You would be based at the Group's Manchester office, offered a very attractive salary/benefits package and report to the Group Managing Director.

Hoggett Bowers

Executive Search and Selection Consultants

BIRMINGHAM, BRISTOL, CAMBRIDGE, CARDIFF, GLASGOW, LEEDS, LONDON, MANCHESTER, NEWCASTLE, NOTTINGHAM, SHEFFIELD and WINDSOR

A MEMBER OF BLUE ARROW PLC

Compliance Officers

City **c.£30,000 +car**

Spicer & Oppenheim, a leading firm of Chartered Accountants, is seeking Compliance Officers to assist the Compliance Partner. In these assistant roles, the Officers will be responsible for establishing effective procedures to ensure that the firm, together with subsidiary organisations, comply with the requirements of membership of the RPB and SRO's. It is envisaged that, after an initial period, these Officers will also be involved with that part of the firm's City Practice which advises securities organisations on the impact of the Financial Services Act.

Applicants, aged under 40, should have a degree or professional qualification. A legal background and some experience of the investment advisory industry and the Financial Services Act would be desirable.

The remuneration package includes a contributory pension scheme and a car, as some travel throughout the UK will be required.

Applicants should apply with a brief C.V. to Jane E. Wright, Senior Recruitment Officer, Spicer & Oppenheim, Friary Court, 65 Crutched Friars, London EC3N 2NP.

SPICER & OPPENHEIM
A MEMBER OF SPICER & OPPENHEIM INTERNATIONAL

UK Finance Manager

Medium-sized publishing and printing group

...contributing to change in an expanding business

c£26,000 + car **Northern Home Counties**

This well-known privately-owned company, which designs and prints a wide range of products, has a turnover of over £12 million. It is UK based, with a substantial export business and a number of overseas operations. From its sound and profitable base it is now going through a period of considerable change to meet the demands of a very competitive market-place.

Reporting to the Group Finance Director, you will initially be responsible for the finance function of the UK publishing business. Your main accountabilities will be the effective management of this operation and the development of improved financial systems and controls. The role is likely to expand significantly in scope in the future.

A qualified accountant is required, preferably aged 30 to 50, with extensive financial management experience, plus the commercial skills necessary to contribute to the overall management of the business.

There is an attractive benefits package, including an excellent pension scheme.

Please write with full career details to B G Woodrow, ref. B.73347.

MSL International

MSL International (UK) Ltd,
Clinton House,
2-4 Clinton Terrace,
Derby Road,
Nottingham NG7 1LY.
Offices in Europe, the Americas, Australasia and Asia Pacific.

Group Financial Controller with fluency in "German"

c£25,000, car

East Anglia

This is a new appointment with a £100m+ subsidiary of a major international group. The Company which has grown dramatically both by expansion and acquisition over the past several years has a number of operating companies throughout the UK and Germany.

Combining both a control and advisory function, constant contact with subsidiaries, particulary those in Germany, is envisaged and therefore travel will be a necessary part of the role, including an element overseas. The job specification is as would be expected from such a position and includes group consolidation, treasury and secretarial duties. This is very much a supporting role, working closely with the Group Financial Director.

Bilingual candidates, either ACA or ACCA should have several years experience in a fast moving, commercially orientated business where reporting deadlines and tight operational standards have been the key to business success.

This is an opportunity to demonstrate personal ability and where career prospects are excellent.

Male or female candidates should send a comprehensive c.v. or telephone for an application form to Howgate Sable & Partners, Barnett House, 53 Fountain Street, Manchester, M2 2AN. Telephone: 061 228 6919 quoting reference: (F.T. 51)

Howgate Sable

EXECUTIVE SEARCH AND SELECTION

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c£26,000 p.a
Financial Controller
Oxfordshire

HIGH TECHNOLOGY

A commercially minded chartered accountant, aged 30-45, male or female, with a working knowledge of French a distinct advantage. Must have proven industrial experience in a small/medium sized manufacturing environment. This experience will include knowledge of continental accounting practices, particularly French, exchange risk control and the consolidation of European subsidiaries. An understanding of micro-computer based systems is essential. An excellent career opportunity, with directorship potential in a small but expanding 'high tech' private company manufacturing and selling its products throughout Europe. Frequent short stay continental travel will be required. Fringe benefits include share option potential, contributory pension, company car, medical/life cover and relocation expenses.

Suitably qualified candidates please phone 01-600 4708 for an application form quoting GF831 (24 hour service).

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3rd Floor
College Hill Chambers
23 College Hill
London EC4R 2RT
Tel: 01-236 8192 (5 lines)
Fax: 01-489 1094

ASSISTANT MANAGER **£20-30,000 + Benefits**
To liaise with the Company Secretary and command responsibility over accounting functions, compliance and personnel. Accounts experience within a securities house is preferred.

ASSISTANT ACCOUNT MANAGER **£25,000 + Benefits**
ACA or ACCA qualified accountant with more than five years experience in Management/Financial Accounting is required by an expanding City Merchant Bank. You'll be supervising two staff in Accounts Department and reporting to the Company Secretary. Age up to 33. Graduates preferred.

For further information please contact:
MRS Y BARKER
on 01 236-8192
JAC Recruitment
23 College Hill, London EC4R 2RT

JAC

EXCITING FAR EAST SALES OPPORTUNITY

An independent international stockbroker seeks two senior experienced salesmen or women in its London office to assist its rapidly expanding Far East business. They will in particular focus their initial efforts on Hong Kong.

The remuneration package will be performance orientated.

Write Box A0862, Financial Times,
10 Cannon Street, London EC4P 4BY

BLOODSTOCK ACCOUNTANT

Required for large stud and racing establishment in East Anglia.

Must be able to work on own initiative.

Responsibilities to include preparation of monthly and annual accounts; budgets; and cashflow forecasts.

Knowledge of computer systems an advantage. Exciting and challenging position for the right individual. Renumeration will be commensurate with ability and experience.

Apply in writing with personal details, and cv before Friday 8th April, to Box A0870, Financial Times, 10 Cannon Street, London EC4P 4BY

ACCOUNTANT

Career opportunity within a small group of Companies offering full exposure to the Board of Directors. You will be a young newly qualified Accountant prepared to direct and produce management information and accounts. This appointment has no upper limits, and your enthusiasm and business skills will help guide the Group to greater things. The Groups activities include electrical manufacturing, electrical contracting and electronics manufacturing. Renumeration would be by negotiation but with a company car.

We are located adjacent to London Heathrow and you should apply privately to R J Zannetti or D J Fidler, Synchronised Systems Limited, Horton Road, Colnbrook, Slough, Berkshire, SL3 OAT or telephone 0753-681598.

FINANCIAL CONTROLLER
ST. ALBANS
to £25,000 + CAR

Dedicated, hardworking and progressive qualified accountant required for fast growing, busy private trading company in St. Albans.

Our client is proud of its reputation for quality and service and is looking for the right person to supplement an experienced management team looking to develop the Company, including through acquisitions if appropriate.

Interesting long-term prospects await the successful candidate, who will be aged 28-35 and have a recognised accountancy qualification. He will be responsible for all aspects of the accounting and reporting requirements of the Company.

Please write comprehensive career details to Span Advisory, 112 Clerkenwell Road, London EC1M 5SA.

FINANCE DIRECTOR

GLAXO HOLDINGS p.l.c.

This opportunity which arises from the impending retirement of the Finance Director is one of the most significant finance appointments in British Industry.

Candidates, preferably in their fifties, must have substantial experience operating on the main board of a major group of companies.

Please send details – which will be treated in complete confidence and will not be divulged without prior consent – to Sir Paul Girolami, Chairman, Glaxo Holdings plc, 61 Curzon Street, London W1.

Finance Controller

High profile commercial role within rapidly expanding company

Surrey — **up to £20k + bonus + car**

The company is part of a highly profitable British multi-national plc with a turnover of c. £80 million. Growth through acquisition and diversification has been dramatic, offering an outstanding opportunity to build from a broader base and create new openings well into the 1990's.

This £3.5 million subsidiary in the building services industry has earned a successful niche position in the competitive and rapidly growing market for air conditioning products.

To develop the business still further a Finance Controller is needed who has the ambition and talent to make a substantial contribution to a small and dynamic management team.

Reporting to the Managing Director you would enjoy a varied, demanding brief and highly visible role, contributing to all major commercial decision-making processes. Key tasks will be to continue the development of financial, budgetary and management information systems, computer systems and generally strengthen the financial management within the operation.

The need is for a qualified accountant, probably late 20's with well developed communication skills and the ambition to be a 'key player' in this rapidly expanding company. Experience gained within a manufacturing operation or similar would be particularly useful but is not considered a prerequisite.

An excellent remuneration and rewards package is offered together with good career prospects.

Please contact our Consultant, Loraine Pemberton, quoting reference: 900/13/1, at: MSL Advertising, Pilgrim House, 2/6 William Street, Windsor, Berks SL4 0BA. Tel: (0753) 842044.

Offices in Europe, the Americas, Australasia and Asia Pacific

MSL Advertising

Finance and Accounting Manager

Thames Valley — **c. £23,000 + car and benefits**

Heseltine, Moss & Co., a member of the Brown Shipley Stockbroking group of companies, wishes to appoint a Finance and Accounting Manager. This is a new role which completes the management team responsible for the development and day to day running of the financial and other support services of the company.

Heseltine, Moss provides a range of stockbroking services to both private and institutional clients and its 13 offices constitute one of the largest networks of any broking house in the UK.

The Manager will report to the Finance and Operations Director and lead a department of approximately 20 staff. His/her duties will include ensuring that the accounting and treasury functions provide the financial information to effectively manage the company's operations and meet regulatory and corporate reporting requirements.

There will be considerable involvement in the implementation of new computer systems, the preparation of annual budgets and the formulation of longer term plans.

The Manager will have every opportunity for career development and the satisfaction of being in a position to have a direct impact on the company's growth.

Candidates should be qualified accountants aged 28-35 and ideally educated to graduate level. They may currently be working in a professional firm, but looking to move into their first line role. Although experience of the financial services industry would be useful, management skills, drive and enthusiasm are essential to succeed in this demanding environment.

Please send details of your career to date to Sue Canning, Personnel Officer, Heseltine, Moss & Co., 30/31 Friar Street, Reading RG1 1AH.

BROWN SHIPLEY STOCKBROKING

Operations Analyst – Leisure

Newly/Recently Qualified Accountant

Central London — ***£22,000 + Car***

Report to the Operations Director of this highly acquisitive British Leisure company. Following a profit increase in excess of 75% in 1987, this £multi million group now offers a superb opportunity to a newly/recently qualified accountant.

The successful candidate will take responsibility for identification of new business options, feasibility studies and investment proposals whilst monitoring capital expenditure and systems development.

Candidates keen to make an immediate contribution to key management decisions, aged 23-27 and ACA/ACCA/ACMA can achieve Operational Controllership within 2 years.

Please contact ANDREW LIVESEY Ref. 4538.

ALDERWICK PEACHELL and PARTNERS LTD., Financial and Accountancy Recruitment, 125 High Holborn, London WC1V 6QA. Tel: 01-404 3155.

Alderwick and Peachell PARTNERS LTD

COMPANY SECRETARY

A New Appointment
London Base
C. £20,000

Our client is a privately owned group of companies serving both regional and national markets. Their continuing growth demands that they recruit a Company Secretary to take on secretarial responsibilities from tha Finance Director.

Responding to the Chairman, he or she will be responsibla to the board for all legal and constitutional aspects of the Company. In addition they will be involved in group pensions, insurances and health and safety administration.

Applicants should be in their lata 20's or early 30's. They will currently be involved in an administrativa role, preferably in a company secretarial department. Ideally candidates will already have or will be about to obtain an ACIS qualification. The ability to communicate effectively is an essential requirement.

This appointment offers an attractive career development opportunity in a Group expanding by organic growth and by acquisition. The benefit package includes a salary in the region of £20 K plus other benefits commensurate with a progressive company.

If you would like to discuss this appointment contact Keith Fowler on 0295 67545. Alternatively, contact Debbia Hannah on the same number for a Personal History Form or send her your c.v. quoting reference TRI/KWF/256. Candidate confidentiality will be maintainad.

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Résumés, which will be acknowledged and forwarded to our client unless a covering letter gives contrary instructions, should be sent to Chris Haworth quoting reference CH 862.

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EXT 4177

PAUL MARAVIVLIA
EXT 4676

ELIZABETH ROWAN
EXT 3456

PATRICK WILLIAMS
EXT 3694

GENERAL APPOINTMENTS APPEAR ON WEDNESDAY

Company Notices

STATE BANK OF SOUTH AUSTRALIA
A $75,000,000
FLOATING RATE NOTES DUE 1994

Holders of the notes of the above issue are hereby notified that for the next interest sub-period the following will apply.

INTEREST RATE: 10.25 PER CENT PER ANNUM
INTEREST PERIOD: 18 MARCH 1988 - 20 JUNE 1988
INTEREST AMOUNT DUE: 20 JUNE 1988
PER A$10,000 NOTE: A$263.97
PER A$5,000 NOTE: A$131.99

BANK OF TOKYO AUSTRALIA LIMITED
AGENT BANK

Company Notices

Crédit National

FF 500,000,000
Guaranteed Floating Rate Notes due 1991

In accordance with the terms and conditions of the Notes, *notice is hereby given that for the interest period* from March 23, 1988 to June 23, 1988 the Notes will carry an interest rate of 8½% per annum.

The interest payable on the relevant interest payment date, June 23, 1988, will be
FF 217.22 per Note of FF 10,000 nominal
and FF 2,172.22 per Note of FF 100,000 nominal

The Reference Agent
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SCHERING

New Coupon Sheets

Schering Aktiengesellschaft
Berlin and Bergkamen
717200

Shareholders are hereby advised that new coupon sheets with coupons Nos. 51-70 and talon will be issued free of charge against presentation of the old talon as from 5th April, 1988 at the offices of:

S.G. WARBURG & CO. LTD.
Paying Agency, 6th Floor,
1 Finsbury Avenue,
London EC2M 2PA

We should be obliged if shareholders would lodge the old talons, sorted by face value and number, with a list of the numbers in triplicate.

Where shares are held in safe custody by a bank, no action by shareholders is required.

The shares of our company will be good delivery with either the old talon or the new coupon sheet between 5th April, 1988 and 4th May, 1988 inclusive, or with the new coupon sheet only as from 5th May, 1988.

Berlin and Bergkamen,
March, 1988.

The Board of Directors

SECTION II – COMPANIES AND MARKETS
FINANCIAL TIMES
Thursday March 24 1988

Chemical Bank to sell off UK mortgage lending unit

BY STEPHEN FIDLER IN LONDON

CHEMICAL BANK, the US banking group, is to sell its UK mortgage lending unit because it is tying up too much of its scarce capital resources.

Chemical Bank Home Loans employs about 100 in London and in Cardiff, 10 per cent of the New York bank's workforce in the UK, and holds about £1.3bn($2.3bn) of mortgages.

S.G. Warburg, the merchant bank, has been asked to auction the business. This is expected to take a few months so no price has been fixed.

The subsidiary, which began mortgage lending in the UK in 1981 and which will be sold as a going concern, is Chemical's only retail banking operation outside the US. While it has been profitable, "it does not fit the long-term strategic plan of the bank," the bank said yesterday.

The move has also been prompted by tougher regulations on bank capital being introduced by the Federal Reserve, the US central bank. Although the new rules will not be fully applied for four years the Fed is increasing its monitoring of bank capital from the middle of this year.

Under the rules most US banks will have to boost the amount of capital they set against their assets. Compared with bank capital proposals in other industrialised countries, they are particularly tough on mortgage loans.

Some UK and other European institutions are understood to have expressed an interest in the subsidiary. The likelihood that capital requirements for mortgages will be lowered in Europe makes house finance a more profitable option for European than for American banks.

US bank share prices are depressed because of Third World debt worries so it is expensive for banks to raise share capital. US banks have been wondering if they can shed businesses inside and outside the US.

Chemical has already tried in vain to sell its capital-intensive US consumer finance business, and other US banks are said to be considering the sale of their UK house finance operations.

Chemical also said five members of its seven-strong mortgage corporate finance team would be transferred to Baring Brothers, the UK merchant bank.

Seagram jumps 23% to $521m

BY DAVID OWEN IN TORONTO

SEAGRAM, the Canadian wine and spirits company which has spent more than $2bn in recent months to acquire Martell of France and Tropicana, the US fruit juice maker, has reported a 23 per cent increase in net income for the year to January 31.

The result reflects improvement in all divisions, with the group's 22.9 per cent stake in Du Pont, the largest US chemicals company, contributing substantially to the advance.

In all, net income totalled $521.1m or $5.46 a share, against $423.5m or $4.45 a year earlier. Sales rose 14 per cent to $3.82bn, from $3.34bn in the previous year.

Net income from spirits and wines was up 40.5 per cent from fiscal 1987 levels at a record $144.5m.

The Seagram International unit again made a major contribution to the improvement, partly aided by favourable foreign exchange rates.

In the US, the Montreal-based company attributed gains to improved sales of its main spirit brands and continued rapid growth in low-alcohol wines, the so-called wine coolers. In Canada, coolers and schnapps showed gains in a generally weak market.

Dominion Textile buys Burlington unit

BY OUR TORONTO CORRESPONDENT

DOMINION TEXTILE, Canada's largest textiles company, is to buy Burlington Industries' Klopman International unit in a deal worth US$90m.

Klopman is a leading European producer of polyester-cotton fabric used for work clothing and various leisure wear fabrics. It employs 2,200 workers and operates two plants in Italy and one in Ireland.

The company already runs six plants in Europe which produce interlining and non-wovens for a variety of industrial applications. In the year to June 30 1987, earnings from international operations totalled C$9m (US$7m) on sales of C$129m.

Klopman is the third purchase by Dominion since last year's unsuccessful bid for North Carolina-based Burlington.

Shortly after Burlington management thwarted Dominion's advances, the Montreal-based company snapped up Burlington's denim mill for US$205m.

Two weeks earlier, it had arranged to buy the Wayn-Tex bag and carpet liner division of Virginia's Waynesboro Textiles for US$130m.

Hewlett and Microsoft react to Apple suit

By Louise Kehoe in San Francisco

HEWLETT-PACKARD, the US electronics group, and Microsoft, the software concern, have both reacted strongly to the copyright infringement suit filed against them last week by Apple Computer.

While vigorously denying Apple's charges, both HP and Microsoft have separately taken issue with the Apple suit.

The suit, which centres on claims that HP and Microsoft have copied display images from Apple's Macintosh computer for use in recently developed software programs, now appears certain to create a bitter legal battle that could deeply divide the protagonists.

Hewlett-Packard accused Apple of modifying screen images from HP's NewWave program to look more like Apple's Macintosh. As part of the evidence supporting its case, Apple presented a series of photographs to illustrate the close resemblance of the visual displays from Macintosh and from HP's NewWave programs.

"The images have been altered," HP said. "One of the features of the NewWave software developer's kit that we are shipping to software publishers and which we have shipped to Apple is the ability to change the design of the screen," HP explained.

According to HP, the screen displays photographed by Apple are not standard NewWave displays.

Apple contends, however, that "all the images that appear in the photographed NewWave screens appear in the NewWave program."

As well as bringing Apple's evidence into question, Hewlett-Packard vehemently denied that it had ever approached Apple requesting a licence to use Macintosh displays as Apple stated in its suit.

Intel to re-enter DRAM market with Micron deal

BY LOUISE KEHOE IN SAN FRANCISCO

INTEL Corporation, one of the leading US chip makers, yesterday announced its re-entry into the market for Dynamic Random Access Memories (DRAM) though an alliance with Micron Technology of Boise, Idaho, one of only two remaining DRAM makers in the US.

The two US companies aim to boost US participation in the memory chip market reducing US dependence on Japanese chip suppliers. The alliance comes at a time when a severe shortage of DRAMs is threatening to cripple the US computer industry.

Intel, which invented the DRAM in the early 1970s, was one of several US semiconductor firms forced to abandon this sector of the business in the mid-1980s in the face of severe price competition from Japanese chip makers.

US allegations of Japanese dumping of memory chips during that period gave rise to the 1986 US Japanese Semiconductor Trade Agreement under which Japan promised an end to dumping.

Announcing Intel's re-entry into the DRAM market yesterday, Robert Noyce, Intel chairman, said that the trade pact had created a business environment in which the risks of a recurrence of dumping have been reduced enabling US companies to make the huge investments needed to rebuild the US memory chip industry.

Dr Noyce rejected criticism of the trade pact, which many have blamed for dramatic increases in DRAM prices and the current shortage. "The reason we have a shortage is because Japan destroyed the US industry. Now we have an opportunity to rebuild it," he said.

Under the terms of its alliance with Micron, Intel has agreed to buy large quantities of DRAMs from Micron which it will resell under its own name. "We will become Micron's largest customer," said Dr Noyce. The three year agreement will initially cover 256K DRAMs. As part of the agreement, Micron has issued to Intel a warrant for the purchase of 600,000 shares of Micron stock at an exercise price of $19.375 per share.

Mr Joe Parkingson, chairman of Micron Technology, said that the alliance with Intel had enabled his company to move confidently toward expanding its production capacity. Micron will today break ground on a new DRAM plant that will double the company's output, he said.

Other US semiconductor companies including National Semiconductor and Motorola have said that they are considering moves to re-enter the DRAM market.

Bow Valley lifts gas reserves in deal with Ocelot

By Robert Gibbens and Steven Butler

BOW VALLEY INDUSTRIES, the Canadian oil and gas group in which British Gas recently acquired a 51 per cent equity interest, is adding nearly 500bn cu ft to its proven gas reserves in a C$384m (US$308m) cash deal with Ocelot Industries, the struggling Canadian oil, gas and petrochemicals company.

The gas is in the Hatton field in Saskatchewan and will increase Bow Valley's proven reserves by 50 per cent. The acquisition also includes all ancillary and gas transmission facilities.

The Hatton field, where the reserves are located, is producing 120m cu ft of gas a day. Ocelot's share is more than 110m cu ft. Peak production levels are expected in two years.

Grolier rejects $415m bid approach from Hachette

BY OUR FINANCIAL STAFF

GROLIER, the US encyclopaedia company, yesterday said its board had unanimously rejected an unsolicited tender offer from Hachette, the leading French publisher, to acquire all of Grolier's outstanding shares for $21 a share in cash.

Grolier dismissed the bid, announced last week and valuing the company at $415m, as inadequate and not in the best interests of the company and shareholders.

The board had unanimously recommended Grolier shareholders not to tender their shares into the Hachette offer. Grolier said it had been in touch with several unnamed parties who had indicated an interest in making an acquisition proposal. It would hold talks with these and other contacts who had shown an interest in the company, including Hachette.

Grolier said it intended to negotiate any acquisition by one of these parties.

If satisfactory terms could not be agreed it would continue to explore ways to maximise shareholder value, including those relating to a leveraged buyout, a financial restructuring or reorganization.

On the Hachette offer, Grolier said it had considered its own financial condition and prospects, the strategic direction of Grolier's businesses, and other factors described in a schedule 14D-9 filed yesterday with the Securities and Exchange Commission.

Grolier said its board had also authorised a delay until April 8 in the distribution of separate certificates evidencing the company's preferred share purchase rights

B&D quits American Standard bid battle

By Our New York Staff

BLACK & DECKER, the US power tools group, has agreed to withdraw from the bidding battle for American Standard, leaving a clear field for the $78 a share, $2.5bn cash bid from Kelso, a New York leveraged buyout specialist.

Kelso will pay Black & Decker $25m to cover its expenses in the takeover saga which Black & Decker triggered with a $56 a share bid in January.

The power tool group retains the right, however, to resume its efforts to acquire American Standard if Kelso's bid fails.

In the meantime, Black & Decker undertook to refrain from buying any shares in the maker of plumbing and air conditioning equipment.

Analysts had thought Black & Decker's $77 a share bid might prevail over Kelso's because it expired two weeks earlier.

But Kelso's statement that it would raise its bid if necessary helped persuade Black & Decker to bow out.

Judge confirms April 7 date for Texaco

By Our Financial Staff

US BANKRUPTCY court Judge Howard Schwartzberg yesterday confirmed Texaco's reorganisation plan, allowing the US oil company to emerge from bankruptcy proceedings on April 7.

The judge, sitting in White Plains, New York State, also denied a request by Mr Carl Icahn, the US investor who is Texaco's largest shareholder, to remove certain releases and indemnities from the plan.

INTL. COMPANIES AND FINANCE

Springer may face hostile takeover

BY HAIG SIMONIAN IN FRANKFURT

AXEL SPRINGER Verlag, West Germany's biggest newspaper group, appeared in danger of falling into unfriendly hands yesterday following the news that Mr Leo Kirch, the Munich-based film entrepreneur, who holds 10 per cent of its shares, has agreed to pool his stake with the 25.9 per cent held by Mr Franz Burda and Mr Frieder Burda, members of the German publishing family.

If, as he has claimed, the reclusive Mr Kirch has a say over a further 16 per cent of Springer's stock then he and the Burdas would control a majority of the shares. The Burdas' holding springs from an agreement in 1983 made after an abortive merger bid with Springer the previous year.

Neither Mr Kirch nor the Burdas have explicitly stated their plans, but gaining management control appears their likely aim. At yesterday's closing price of DM560, the Springer group has a stock market value of around DM1.8bn ($1.1bn).

Last July there were reports that Mr Kirch was talking to other large shareholders about co-operating on publishing and television within the Springer group.

The company itself has reacted angrily to the latest news. According to Mr Bernhard Servatius, chairman of its supervisory board, "the inheritors and executors of Axel Springer know how to defend every attack on the existing order in the company."

Axel Springer Verlag, which publishes the popular Bild Zeitung and the quality daily Die Welt newspapers, among others, has been the subject of considerable speculation following the flotation of 49 per cent of its stock in 1985 and a series of boardroom rows last year.

According to a statement by the Springer group, Mr Kirch and the Burda brothers would seek to appoint five of the company's nine supervisory board members, giving them sway over appointments to the managing board and company policy.

Meanwhile, the German Cartel Office yesterday took the initial step of contacting Mr Kirch and the Burdas to clarify their holdings and intentions. If they do hold a majority, the authorities would then launch an investigation into any potentially anti-competitive consequences.

However, the chances of the Cartel Office blocking the agreement are not immediately obvious.

Though both Mr Kirch and the Burdas are associated with the media business, the combination does not immediately suggest any monopolies.

Mr Kirch is heavily entrenched in the film business. Meanwhile, the two Burda brothers have limited themselves to printing and paper following an agreement with a third brother, Mr Herbert Burda, who took control of the family's substantial publishing activities.

Skandia takes stake in Vesta

BY SARA WEBB IN STOCKHOLM AND KAREN FOSSLI IN OSLO

SKANDIA, THE leading Swedish insurance company, yesterday stepped up its plans to create a Nordic insurance group when it agreed to take a stake in Vesta, the second largest Norwegian insurance company, in a deal worth NKr1.1bn ($172.6m).

The move is part of Skandia's strategy to strengthen its standing in the Nordic region in readiness for the creation of the EC internal market in 1992.

It has recently bought stakes in Finnish and Danish insurance companies.

Vesta is to make a direct share issue to Skandia which will give the Swedish group an initial 25 per cent shareholding for NKr476m, and will also issue a convertible bond which will enable Skandia to increase its shareholding to 50 per cent after two years – provided the Norwegian authorities give their permission.

Normally, foreign companies are not allowed more than 10 per cent in Norwegian finance and insurance groups.

Vesta is attractive for Skandia because both companies have a large share of commercial business.

Vesta has 18 per cent of the non-life insurance market in Norway, 9 per cent of the life business and 20 per cent of the finance company market, while Skandia has 24 per cent of the non-life business in Sweden and 38 per cent of the life business.

The deal means a capital increase of NKr1.1bn for Vesta, which last year incurred an operating loss (before provisions) of NKr172.5m, compared with a loss of NKr217m in 1986.

Pohjola, the leading Finnish insurance group, and Kansallis-Osake-Pankki, Finland's leading bank, agreed last December to take a 15 per cent stake in Skandia, and in return the Swedish group is in negotiations over taking a 10 per cent stake in Pohjola.

German metals company sees earnings rise

By Andrew Fisher in Frankfurt

METALLGESELLSCHAFT, the West German mining and metals company, is on track for higher profits this financial year after a 10 per cent rise in turnover during the first half, Mr Dietrich Natus, chairman, said.

Results so far in the year to September 1988 were above those of the same period in 1986-87 and higher than budgeted, he added. This was the case in each of the group's three main sectors – raw materials, plant construction and chemicals.

Mr Natus said: "If no serious negative influences come from outside in the next few months, we can expect a more favourable profit than in the previous year." The percentage rise would be at least 10 per cent.

In 1986-87, Metallgesellschaft raised net profits slightly to DM100m ($59m) from DM98m on turnover down to DM13.3bn from DM14.9bn. This was mainly the result of a reduction in oil trading in unstable markets and lower nickel prices. The company is again paying a dividend of DM6 per share.

Mr Natus said it had been especially difficult to calculate profit expectations for this year. Early in 1986-87, all metal prices were low, although some rose later, and the D-Mark had risen steadily against the dollar.

But it had been assumed that economic conditions would not change drastically in 1987-88. "This has been the case in the first few months, with the dollar holding up and the economy remaining at a favourable level."

Metal prices had also recovered – notably those for aluminium, copper and zinc – with sharp rises for both nickel and cadmium.

Metall Mining Corporation, the new Canadian-based subsidiary which groups Metallgesellschaft's foreign mining activities, had developed well. Among its holdings, Teck, the Vancouver mining concern, was continuing successfully while Cominco, also Canadian, had moved from loss to rising profits.

Schneider lifts bid for Télémécanique

BY PAUL BETTS IN PARIS

SCHNEIDER, THE privately owned French industrial group, has raised the stakes further in the battle for Télémécanique by making an outright bid worth FFr8.8bn ($1.5bn) for the industrial automation company.

Schneider's new offer of FFr5,400 a share for all outstanding Télémécanique shares tops the latest offer by Framatome, the nuclear power group 40 per cent owned by Compagnie Générale d'Electricité. Framatome is offering FFr4,500 a share for all Télémécanique shares.

Although financial analysts believe the bidding contest has now reached excessive levels, the latest Schneider offer eloquently reflects the resolve of Mr Didier Pineau-Valencienne, the Schneider chairman, to gain control of Télémécanique in spite of fierce opposition from the factory automation company's management and employees and strong reservations on the part of the French Government.

More than 5,000 Télémécanique employees staged a demonstration near the Elysée Palace in Paris yesterday to protest against Schneider's takeover bid.

However, the new offer puts Schneider in a strong position to clinch the contest against Framatome, Télémécanique's "white knight." Schneider has already accumulated a 24.5 per cent stake in Télémécanique and is believed to control an additional stake through its allies.

Before making its outright bid for Télémécanique, Schneider had made a partial bid of FFr5,500 a share for 45 per cent of the factory automation company.

Flat gas sales limit DSM to modest increase

By Laura Raun in Amsterdam

DSM, THE Dutch state-owned chemicals company, lifted its earnings modestly in 1987 following flat gas sales, partly as a result of a deconsolidation in preparation for privatisation.

The company confirmed that its move toward the private sector, via the sale of part of the Government's shareholding, would take place this year. DSM said it was waiting on government legislation and parliamentary approval.

Local expectations are that about 30 per cent of the company will be publicly floated, which would make the issue the biggest initial offering in the history of the Amsterdam Stock Exchange.

DSM's gas activities serve as a channel for state gas revenues and will remain in government hands after the privatisation.

From January last year the state's gas revenue has not been consolidated in DSM's turnover, although the company retained its share of operating profits.

Net income rose 7 per cent to Fl 442m ($232.6m) from Fl 412m in 1986 following a patchy performance by various divisions.

Plastics soared on cost-cutting and process improvements and agricultural chemicals halved their losses. However, plastic products fell into the red while chemical products dropped sharply. Turnover was flat, at Fl 8.98bn compared with Fl 8.99bn.

Belgian bank group ahead after reduced write-downs

BY WILLIAM DAWKINS IN BRUSSELS

GENERALE de Banque, Belgium's largest commercial banking group, yesterday announced an 8.7 per cent increase in last year's net profits and pronounced its independence in the prolonged takeover battle for Société Générale de Belgique, which directly owns 13.4 per cent of the bank.

Consolidated net profits rose to BFr6.4bn ($181.3m) in 1987 from BFr5.9bn, a climb which the bank attributed to reduced write-downs and depreciation charges. These fell to BFr9.9bn from BFr11.5bn the previous year.

Mr Jacques Groothaert, the bank's president, confirmed yesterday that it had lent BFr29bn to financial holding affiliates of La Générale to help finance the defence against Mr Carlo De Benedetti's takeover bid.

However, he insisted it was a normal loan to an important customer and that the bank would take no sides in the fight for ownership of La Générale.

"Our independence from all parties would be preferable to any other solution," he told the bank's annual meeting.

Last month, the bank agreed to form a joint venture with Amsterdam-Rotterdam Bank of the Netherlands, prompting speculation that it was seeking an ally in case Mr De Benedetti's bid succeeded.

Net dividends on ordinary shares are to rise from BFr245 to BFr255, with a total distribution amounting to 61 per cent of the group's net profit.

The consolidated balance sheet total rose from BFr2.08bn to BFr2.17bn, growth being restrained by the dollar's weakness and a policy of limiting the use of bankers' deposits.

There was, however, a sharp jump in private sector lending.

Sulzer talks break down

BY OUR FINANCIAL STAFF

TALKS BETWEEN Sulzer, the Swiss engineering group, and Mr Tito Tettamanti over the sale by the latter of a 10 per cent stake in Sulzer have run into difficulties, it was announced by both sides yesterday.

Mr Tettamanti, a Lugano-based lawyer who leads a group of investors controlling about 35 per cent of the Sulzer registered shares, has been seeking a seat on the company's board with a view to becoming an active rather than passive shareholder.

Last month Sulzer disclosed that it had been in talks with potential industrial partners, including Schindler, the lift maker.

Income slips at Gist-Brocades

GIST-BROCADES, the Dutch biotechnology company, said net income fell by 13 per cent to Fl 96m ($50.5m) in 1987 from Fl 111m the year before because of the strong guilder and disposal of a distillery, Our Amsterdam Staff writes.

However, the company said it expected profits to rebound this year. Developments in the first few months of 1988 led Gist to declare an unchanged dividend of Fl 1.30 per share for 1987. Turnover edged up a modest 2 per cent to Fl 1.84bn in 1987 from Fl 1.8bn.

Three further issues in Canadian dollar sector

BY CLARE PEARSON

THE FLOW of new Eurobond issues in Canadian dollars continued relentlessly yesterday despite growing concern that the primary market is now full up with recent paper.

Three new bonds surfaced yesterday, bringing the week's total so far to C$440m. Last week's C$900m worth had been widely considered enough to satisfy present.

Some dealers argued yesterday, however, that investor interest was still strong on a selective basis, given the continued strength of the Canadian dollar combined with the yield pick-up Canadian dollar bonds provide over US dollar instruments.

However, some of the nervousness in US Treasury bonds has spilled over in the Canadian dollar market recently, as it tends to move closely in line with US government bonds.

A C$75m issue for Oesterreichische Laenderbank was considered the best of yesterday's trio of bonds, since Austrian bank names tend to attract solid European interest. The five-year 9⅝ per cent bond, led by Canadian Imperial Bank of Commerce, was bid at less 1.85, against 1⅞ per cent fees. It was priced at 101⅛.

Dealers were less enthusiastic about a C$150m five-year 9¼ per cent bond for GMAC Canada, which was launched at a 58 basis point yield spread over Canadian government bonds. Some said the bond looked expensive at this level, compared with outstanding issues for Ford, which is seen as an improving credit.

However, Swiss Bank Corporation Investment banking, the lead manager, said its own client base did not view the two motor companies in this way, and GMAC's new bond provided switching opportunities out of earlier deals for the borrower. The deal, priced at 101¼, traded at levels around its fees.

A C$40m five-year bond for the City of Bergen, launched on the same terms as GMAC's issue, looked tight although it came too late to elicit much market reaction. Dresdner Bank was the lead-manager.

The main other focus of attention in the market was a DM500m deal for Lufthansa International. This met a slightly weak response, as it was launched into a market already overburdened with unplaced paper where there has been little recent buying interest.

The terms were also seen as slightly tight. The bond has a 5⅝ per cent coupon and par issue price on the 10-year deal. It was quoted by the lead-manager, Deutsche Bank, at less 2.30 bid, against 2½ per cent fees, but at lower levels elsewhere.

Prices of domestic bonds rose by up to 65 basis points, triggered by professional short covering. An announcement that withhold-

INTERNATIONAL BONDS

ing tax, expected to be introduced next year, would not be applied to accrued interest on bonds, helped sentiment. D-Mark Eurobonds closed about 10 basis points firmer where changed.

Elsewhere, a FFr600m 9¼ per cent issue for Finland marked the reopening of the French franc straight Eurobond market after a hiatus of about six months. Lead-manager Banque Nationale de Paris Capital Markets said it had found demand for fixed rate paper despite the political uncertainty hanging over the French franc markets.

The seven-year par-priced bond traded comfortably inside its 1⅞ per cent fees at about less 1¼ bid.

The market also welcomed a new DKr300m bond for Postipankki, the Finnish bank, as new Danish kroner issues have been scarce in recent weeks. The four-year 10 per cent bond, priced at 101⅝, was led by Bankers Trust International with Den Danske Bank as lead-manager.

Deutsche Bank led an A$60m four-year 12⅝ per cent bond for Creditanstalt, the Austrian bank. Priced at 101¾, it was bid at less 1⅞, the level of its total fees.

Nomura International led a $200m five-year equity warrants bond for Nippon Seiko, the Japanese ball bearings company. The deal, with an indicated 4⅝ per cent coupon, traded at around 107⅛.

In Switzerland, prices were unchanged but in improved turnover. A SFr150m 5 per cent 25-year bond for BMW Finance, improved in the grey market to less 2⅛ bid, but late in the day was back to its recent level of less 2⅞.

Wirtschafts-und Privatbank led a SFr150m 10-year bond for Landsteiermark, the Austrian state, with a 4⅞ per cent coupon and 100⅞ pricing. It traded at less 2⅞ bid.

Banque Paribas (Suisse) announced a SFr60m convertible for Dai-Ichi Katei Denki, a Japanese consumer electronics company. The bond matures in August 1993 and pays an indicated semi-annual one per cent coupon.

●Prudential-Bache Capital Funding has announced changes to its equity and bond syndicate departments. Mr Ged Smith, current manager of the fixed interest desk, is leaving PBCF and his deputy, Mr David Wellborn, will take over. Mr Jim Best, previously at First Chicago has joined to head the equity syndicate department.

●The European Community is issuing a L100bn bond in the US. This is not only the Community's first financing in lira, but also the first lira-denominated public bond issue in the US domestic market.

Bear, Stearns, which is leading the seven-year issue, said it came in response to a growing interest in lira instruments among US investors and the initial reaction had been positive.

It is more than three years since the Community issued its sole previous non-dollar bond in the US domestic market, in Ecu.

The US domestic market for foreign currency bonds has mushroomed since this deal was launched, helped by the prolonged weakness of the dollar.

The Community's bond is due to be priced this morning. It will pay interest semi-annually commencing in September this year.

The Community has not so far tapped the Eurolire market.

FT INTERNATIONAL BOND SERVICE

Listed are the latest international bonds for which there is an adequate secondary market.

Closing prices on March 23

US DOLLAR STRAIGHTS	Issued	Bid	Offer	Change on day	Change on week	Yield
Abbey National 7½ 92	200	95½	96⅛	0	-0⅛	8.82
All Nippon Air 9⅛ 97	100	†97¼	97¾	0	-1	9.78
American Brands 9¾ 92	150	99⅝	100⅛	+0⅛	+0⅛	8.92
A/S Eksportfinans 7¾ 93	100	†94¾	95¼	0	-0⅛	8.76
A/S Eksportfinans 7¾ 92	150	95⅞	96⅛	-0⅛	-0½	8.54
Barc Bk. Fin. 10⅛ 89	200	†103⅛	103⅝	0	-0⅛	7.96
Belgium 9¾ 92	400	†101½	102	0	-0½	8.61
British Telecom 7⅛ 96	250	90⅛	91	-0⅛	-0⅝	9.22
British Telecom 8⅞ 94	150	100⅛	100⅝	-0⅛	-0⅛	8.75
Canada 9 96	1000	100⅛	101	-0⅛	-0⅛	8.86
Canadian Pac 10⅛ 93	100	†105	106	0	-0⅛	9.35
C.C.C.E 7¾ 91	113	†96	96½	0	-0⅛	8.35
C.N.C.A 7⅛ 91	150	95⅛	96¾	0	-0⅜	8.52
Coca-Cola Ent. 8⅛ 90	100	†101⅛	101⅝	0	0	7.43
Credit Lyonnais 9 91	200	101⅝	102⅛	0	-0⅜	8.25
Credit National 7⅛ 92	100	95⅞	96⅛	-0⅛	-0⅜	8.53
Credit National 7⅛ 91	150	96½	96⅞	-0⅛	-0½	8.40
Denmark 7⅛ 92	500	94⅝	95⅛	-0⅛	-0⅜	8.67
Denmark 8⅛ 91	300	*†100	100	0	0	8.22
E.E.C 7 91	100	95¾	96⅛	0	-0⅛	8.24
E.E.C. 7⅛ 93	250	94⅞	95⅛	-0⅛	-0⅛	8.53
E.E.C 8⅛ 96	100	*†94⅛	95⅛	0	-0⅝	9.13
E.I.B. 7⅛ 93	100	95⅛	95⅝	-0⅛	-0½	8.64
E.I.B. 9⅛ 97	150	†100⅛	100⅝	-0⅜	-1⅛	9.28
Finland 7¾ 97	200	91⅛	91⅝	-0⅛	-0⅜	9.32
Finland 7½ 93	200	94⅞	95⅜	+0⅛	-0½	8.67
Finn.Exp.Cd 8½ 92	200	99⅞	100⅛	0	-0⅜	8.46
Ford Motor Cred 11⅛ 90	100	105⅛	106	-0⅛	-0⅛	7.97
Gen Elec Credit 10⅛ 00	200	102½	103⅛	0	-0⅛	9.84
G.M.A.C 8 89	250	100⅛	100⅝	0	0	7.65
G.M.A.C 8⅛ 89	200	100⅛	100⅝	0	-0⅛	7.67
Hoesch 8⅛ 97	100	†93⅛	94⅛	0	-0⅛	9.26
Italy 9 90	1000	102	102½	0	-0⅜	7.94
Liberty Mutual 8½ 96	150	*†96⅛	96⅝	0	0	9.13
L.T.C.B of Japan 8 91	100	98¾	99⅛	0	-0⅜	8.32
L.T.C.B of Japan 8 97	200	90⅛	90⅝	-0⅛	-0⅜	9.64
Mercedes-Benz Cd. 8½ 95	100	98⅛	98⅝	0	-0⅜	8.77
Metropolis Tokyo 9½ 93	200	102⅝	103⅛	-0⅛	-0⅜	8.66
Mitsubishi Fin. 7⅞ 93	100	†94⅞	94⅞	+0⅛	-0⅜	9.10
Mutual America 7⅛ 92	100	†96	96½	0	-0⅜	8.81
Norway 8⅛ 95	500	100½	101	0	-0½	0.55
Pepsico Inc 7¾ 93	200	†95⅛	95⅝	-0⅛	0	8.51
Prudential Crp. 8⅛ 94	125	99⅛	100	-0⅛	-0⅝	8.79
Qantas Airways 10⅛ 95	140	105⅛	105½	-0⅜	-0⅜	9.33
Saab Scania 9½ 91	125	†103⅛	103⅝	0	-0⅛	8.14
Saskatchewan 10⅛ 92	100	107	107½	0	-0⅛	8.50
State Bk S Aust 9⅛ 93	100	101	101½	-0⅛	-0½	8.91
Swedish Expt.Crd 7⅛ 91	100	†96⅛	96⅝	0	-0⅜	8.36
Swed Exp Cred 10 92	100	104⅛	105⅛	-0⅛	-0⅛	8.58
Sweden 7 91	250	96⅜	96⅝	+0⅛	-0⅜	8.15
Sweden 7 92	250	†95⅛	96⅛	0	-0⅛	8.23
Sweden 8⅛ 96	200	97⅛	98⅜	-0⅜	-0⅜	9.13
Sweden 8½ 92	200	†100½	101	-0⅛	-0½	8.27
Toyota Mtr. Cred. 9 90	200	†102	102½	0	-0⅛	8.02
Victorian Rep 11⅛ 92	150	109⅛	109⅝	-0½	-0½	8.79
World Bank 7 92	300	†95⅛	96⅜	-0⅛	-0⅛	0.24
World Bank 9 97	300	98⅜	99⅜	-0⅛	-0⅜	9.15
Yasuda Trust Fin 8½ 95	100	97½	98	0	-0⅛	9.07

Average price change... On day -0⅛ on week -0½

DEUTSCHE MARK STRAIGHTS	Issued	Bid	Offer	Change on day	Change on week	Yield
Asian Dev BK. 6 94	200	102¾	103⅛	+0⅛	+0⅛	5.41
Avis Fin SVS 5¾ 92	100	†101⅛	102⅛	-0⅜	-1⅛	5.30
Bank of Tokyo 5⅛ 93	100	†103½	103⅞	-0⅛	0	4.90
Central BK Turkey 7 92	200	†103⅛	104⅛	+0⅛	0	5.95
Degussa Int. 6⅛ 97	200	100⅛	101⅛	0	-0⅛	6.01
E.I.B 5½ 98	150	96⅛	97⅛	+0⅛	+0⅛	5.93
E.I.B 6 97	300	100⅛	100⅝	+0⅛	-0⅛	5.92
E.I.B. 6⅛ 96	300	101⅝	102⅛	+0⅛	0	5.81
E.I.B 6⅛ 97	400	100⅞	101⅛	+0⅜	+0⅛	5.94
E.I.B. 6¾ 95	300	106⅜	107⅛	+0⅛	+0⅛	5.67
Euro Coal & Steel 5¾ 97	175	99⅛	99⅝	0	0	5.95
Eurofima 6⅛ 96	100	102⅛	103⅛	0	0	5.82
Elec De France 5⅛ 97	300	98⅜	99⅛	+0⅛	-0⅛	5.92
Forsmark Krag. 5¾ 93	200	101⅛	102	+0⅛	+0⅛	4.75
I.A.D.B 6 97	200	98⅞	99⅜	+0⅛	+0⅛	6.14
IBJ 5¾ 92	100	†103½	104	0	-0⅛	4.93
Japan Finance 5⅛ 97	100	97⅛	98⅛	+0⅜	-0⅛	6.08
Ireland 6½ 97	300	†101	101⅛	0	+0⅛	6.31
Korea Dev BK 6⅛ 93	100	102⅞	103⅜	0	-0⅛	5.87
Malaysia 6⅛ 94	150	103⅛	104⅛	0	+0⅛	5.52
Oesters. Kontbk. 5 93	300	100⅝	101⅜	+0⅛	+0⅛	4.76
Portugal 5⅛ 92	150	102⅛	103⅛	0	0	4.96
Portugal 6⅛ 95	150	102⅞	103⅛	-0⅛	-0⅛	6.06
Royal Insurance 5½ 92	300	†102	102½	+0⅛	+0½	4.87
Statoil 6⅛ 97	200	†100⅛	100⅝	-0⅛	-0⅛	6.17
Soc Cent Nucleair 7⅛ 95	150	103½	106	+0⅛	+0⅛	6.26
Tokyo Elec. Power 6 97	300	†99⅝	99⅞	+0⅛	+0⅛	6.04
World BK 6⅛ 97	600	101⅞	102⅝	+0⅛	+0⅛	5.80

Average price change... On day +0⅛ on week +0⅛

SWISS FRANC STRAIGHTS	Issued	Bid	Offer	Change on day	Change on week	Yield
African Dev Bk. 5⅛ 96	100	†102	102½	0	0	5.28
Aufinag 5 02	150	†100⅛	100½	-0⅛	-0⅛	4.96
Bk Frgn Econ Ussr 5 98	100	†100	100½	-0½	0	4.97
Bayer W/W 2½ 02	250	*†97¼	98⅛	0	+1⅛	2.66
Bayer Vrmbk Ds.4½ 98	100	†101½	101⅞	-0⅛	+0⅛	4.54
Elec. De France 5 07	100	†101	101⅛	-0⅛	-0⅛	4.91
E I B 4⅛ 97	200	†101⅛	101⅛	+0⅛	+0⅜	4.56
E I B 4½ 97	200	†100⅛	100⅛	+0⅛	+0⅛	4.56
Enso Gutzeit 5 99	100	†101	101½	0	+0½	4.85
Ireland 5 02	150	†97½	97⅞	0	+0⅛	5.24
Nippon Sols Ksha 4⅛ 93	80	†103½	103⅞	+0½	+0½	3.83
Occidentl Petrol 5⅛ 92	100	†103	103⅛	0	0	4.85
Prov of Manitoba 4⅛ 02	200	†101⅞	102	+0⅛	+0⅜	4.50
Prudential Fin 4⅛ 98	200	†101½	101⅛	-0⅛	-0⅛	4.54
Qantas Airways 4⅛ 97	110	†98	98⅛	-0⅜	-0⅛	4.98
SHJ Holdings 4¾ 94	100	*†101⅛	101⅛	0	+0⅛	4.41
Trans-Can Pipe 4½ 94	100	†101⅛	101⅛	-0⅛	0	4.40
[illegible] 5½ 96	120	†103⅛	104	-1	-0⅛	4.91
Victoria Pub Auth 5⅛ 05	110	†103	103⅛	-0⅛	-0⅛	5.06
World Bank 5 02	200	†99⅛	100	0	0	5.02

Average price change... On day 0 on week -0⅛

YEN STRAIGHTS	Issued	Bid	Offer	Change on day	Change on week	Yield
Belgium 5⅛ 92	55	102½	102¾	+0⅛	0	4.74
Belgium 4⅛ 94	45	98	98½	-0⅛	+0⅛	4.98
Canada 4⅛ 92	80	98⅝	99⅛	0	-0⅛	4.83
Elec. De France 5⅛ 94	20	101	101½	0	0	4.90
Ireland 5⅛ 93	30	100⅝	101⅛	0	-0⅛	4.92
Norway 4¾ 92	60	98½	98⅞	0	0	4.66
Rep. of Italy 5⅛ 92	150	103⅞	104⅛	0	-0⅛	4.61
Sweden 4⅛ 92	50	98½	99	0	0	4.70
World Bank 5½ 92	50	103½	103⅞	0	-0⅛	4.58

Average price change... On day +0 on week 0

OTHER STRAIGHTS	Issued	Bid	Offer	Change on day	Change on week	Yield
Abbey Nat.BS.10⅛ 93 £	50	101½	102	+0⅛	+0⅛	9.80
Alg. Bk. Ned. 5½ 92 Fl	150	99⅝	100⅛	+0⅛	0	5.53
Amro Bank 6⅛ 92 Fl	150	102⅝	103⅛	0	0	5.45
Barc. Aust. 14 91 A$	20	103⅛	103⅞	0	-0⅛	12.58
Barc. Bk. 10⅞ 97 £	250	100⅜	100⅞	+0⅛	+0½	10.13
British Airways 10 98 £	100	98⅜	99⅛	+0⅛	+0½	10.18
C.I.B.C Mort. 10⅛ 93 C$	100	†102	102½	0	-0½	10.13
Denmark 7⅛ 92 ECU	100	101½	102	+0⅛	+0⅝	7.20
DG Fin. Co. 13⅛ 90 A$	50	†102⅛	103½	+0⅛	0	12.17
DG Fin. Co. 14 90 A$	75	†102⅞	103⅛	-0⅜	0	12.50
Deutsche Bank 9⅞ 97 £	75	†100⅛	100⅝	-0⅛	0	9.79
Deutsche Bk.14⅛ 92 A$	100	†107⅛	107⅝	+0⅛	+0⅛	11.76
Dresdner fin.13⅞ 91 A$	100	†105⅛	106⅛	+0⅛	-0⅜	11.57
E.I.B 10⅛ 98 C$	130	†98⅞	99⅜	0	-0⅛	10.27
E.I.B 8⅝ 93 LF	1000	†102½	103½	0	0	7.85
Euratom 7⅛ 97 ECU	145	97⅛	97½	0	+0⅛	7.76
Eurofima 7½ 92 Fl	50	106	106½	-0⅜	+0⅝	5.74
Eurofima 17½ 89 NZ$	50	†103	104	0	-0½	14.77
Fed.Bus.Dv.Bk.9⅞ 92 C$	75	†100½	101	0	-0⅛	9.50
Ford Cr.Can.10⅛ 93 C$	100	†103½	104	0	+0⅛	9.74
Gillette Can. 9⅛ 93 £	70	98½	98⅞	0	+0⅛	9.98
G.M.A.C. 9⅛ 92 C$	75	98⅛	99⅛	0	-0⅜	9.54
G.M.A.C Aus. Fin.14 90 A$	50	102½	103⅛	0	-0½	12.47
Halifax BS 10⅞ 97 £	100	100½	101⅛	+0⅜	+0⅛	10.24
Heineken NV. 6½ 91 Fl	150	†104	104½	0	-0⅛	4.87
Hunter Douglas 7 91 Fl	50	†102⅞	102⅞	0	-0⅛	6.03
Imp Chem Inds 10 03 £	100	99	99⅜	+0⅛	+0½	10.11
Inv.Industry Int.10 93 £	60	102⅛	102½	+0⅛	+0⅛	9.41
Lloyds Bank 10⅛ 98 £	150	99	99½	+0⅛	+0½	10.37
Nat.Australia 14 92 A$	50	103⅛	104⅜	-0⅛	-0⅛	-0.77
Nat. West.Bk.13⅛ 92 A$	50	†102⅞	103⅜	-0⅛	-0½	12.16
Nationwide BS 10⅛ 93 £	75	101⅛	101⅝	+0⅛	+0⅝	9.76
Ned.Gasunie 6⅛ 90 Fl	75	†103½	104	0	0	5.23
Ned.Midd.Bank 6 92 Fl	150	101	101½	0	+0⅛	5.64
New Zealand 7⅞ 93 ECU	200	100⅞	101⅛	+0⅛	+0⅜	7.50
Oesters.Ktbk.13⅛ 94 A$	75	105½	106	-0⅛	-0⅛	12.26
Prudential Fin.9⅛ 07 £	150	92	92⅛	0	-0⅛	10.32
S.D.R. 7⅛ 95 ECU	90	100⅜	100⅛	+0⅛	+0⅛	7.65
Wereldhave 7½ 90 Fl	75	†104	104½	0	0	5.51
West.Utr.Hyp. 7 90 Fl	75	†102½	103	+0⅜	0	5.79
World Bank 6⅛ 91 Fl	100	†103	103½	+0⅛	+1	5.05
World Bank 5⅛ 92 Fl	100	101⅛	102	-0⅜	+0⅛	5.29
World Bank 13⅛ 92 A$	100	†103⅛	103⅞	-0⅛	-0⅝	12.19

FLOATING RATE NOTES	Spread	Bid	Offer	C.dte	C.cpn
Alberta 3 93	.0312	100.17	100.27	13/06	8.17
Alliance & Leic.Bld 94 £	.08	99.33	99.38	21/04	9.02
Belgium 91	0	100.15	100.25	22/08	7
Britannia 5 93 £	0⅛	99.76	99.81	8/04	9⅛
Chase Manhattan Corp 97	0⅛	99.10	99.35	22/08	6.94
Citicorp 98	10⅛	96.00	96.25	31/03	6.83
EEC 3 92 DM	10	100.34	100.39	22/08	3.56
Halifax BS 94 £	.1	99.77	99.82	9/05	9.6
Invt. In Industry 94 £	0	99.64	99.73	24/05	9.44
Leeds Perm. B/S. 94 £	0⅛	99.91	99.96	13/04	9.12
Midland Bank 01 £	.1	94.94	95.94	11/05	9.41
Milk Mkt. Brd. 5 93 £	0⅛	99.56	99.61	30/03	9
New Zealand 5 97 £	.07	99.68	99.78	18/05	9.44
New Zealand 5 01	0	98.98	99.08	4/08	6.98
Shearson Lehman Hlds 91	10⅛	99.00	99.50	9/05	6.94
United Kingdom 5 92	0	100.06	100.12	7/04	7.12
Woodside Fin. 5⅛ 97	0	99.06	99.16	28/04	7.13
Woolwich 5 95 £	0⅛	99.56	99.61	19/05	9½

Average price change... On day -0.01 on week 0.00

CONVERTIBLE BONDS	Cnv. date	Cnv. price	Bid	Offer	Chg. day	Prem
Alcoa 6⅛ 02	10/87	62.	97½	98½	-0½	35.02
Alco Health 6⅛ 01	17/86	26.25	84½	85½	-0⅛	25.70
American Brands 7⅛ 02	9/87	56.7	100⅛	101⅞	+0⅛	26.95
American Can Co. 5½ 02	4/87	66.75	67	68	+0⅛	44.74
Ashikaga Bank 2⅛ 02	4/87	967.	144⅞	146⅛	+2	2.82
Asics 5 92 DM	12/83	438.6	159⅛	160⅛	+2	-1.27
CBS. Inc. 5 02	10/87	200.	95⅛	96⅛	0	18.64
Fuji Hvy Inds 3 00	8/85	676.	171½	173	-1⅛	0.34
Fujitsu 3 99	5/84	1106.	246⅛	247⅞	+3⅜	0.54
Gunma Bank 2⅞ 02	4/87	808.	170⅛	171⅞	-0⅛	2.93
Land Secs. 6⅛ 02 £	6/87	6.72	97⅛	98⅛	0	21.73
MCA INC 5½ 02 US	10/87	69.62	82½	83⅛	+0⅝	37.59
Minolta Camera 2⅛ 94 DM	2/86	1004.	95½	97	+0⅛	28.05
Mitsui Trust 2⅞ 02	10/86	1903.	154⅞	156⅛	-0⅛	0.46
Rexi Plc 5⅛ 03 £	11/87	4.3	102⅛	103⅛	+0⅜	52.57
Nishi Nipp.Bk.2⅞ 03 US	4/88	804.	108½	109⅞	-0⅛	0.85
Omron Tateisi 2⅛ 02	4/87	1310.	227½	229	+8⅛	3.32
Ranks Hovis 4⅛ 03 £	1/88	3.5	107⅞	108⅛	-0⅛	17.30
Redland 7⅛ 02 £	1/87	5.4	97⅛	98⅛	-0⅛	20.43
Texas Inst. 2⅛ 02 US	9/87	82.87	81⅛	82⅛	-0⅝	30.72
W.R. Grace 6⅛ 02 US	9/87	42.12	85	86	+0⅛	34.64

* No information available-previous day's price

† Only one market maker supplied a price

Straight Bonds: The yield is the yield to redemption of the mid-price; the amount issued is in millions of currency units except for Yen bonds where it is in billions. Change on week = Change over price a week earlier.

Floating Rate Notes: Denominated in dollars unless otherwise indicated. Coupon shown is minimum. C.dte = Date next coupon becomes effective. Spread = Margin above six-month offered rate (three-month; above mean rate) for US dollars. C.cpn = The current coupon.

Convertible Bonds: Denominated in dollars unless otherwise indicated. Chg. day = Change on day. Cnv date = First date of conversion into shares. Cnv. price = Nominal amount of bond per share expressed in currency of share at conversion rate fixed at issue. Prem = Percentage premium of the current effective price of acquiring shares via the bond over the most recent price of the shares.

Big losses on futures by French bank

By George Graham in Paris

MR YVES LE GUAY has resigned from the chairmanship of Banque de l'Entreprise, a small French bank specialised in the construction industry, following the disclosure of heavy losses in the futures markets.

The losses could mount as high as FFr200m ($35m), wiping out the bank's capital base.

Banque de l'Entreprise's shareholders – mainly a grouping of construction industry federations – have promised to put up the necessary money to keep the bank going, even though they recently had to raise a sizeable sum to buy control of the sister Banque du Bâtiment et des Travaux Publiques, privatised last year by the French Government.

The bank has been monitored closely by the French authorities for some months, but supervisors are confident that the backing of the shareholders will prevent the losses from leading to a banking collapse.

The futures markets have caused problems to some other French banks. One small regional institution had to be taken over last year by a neighbouring bank after it had run up losses on the Matif, the Paris financial futures market.

Short-term instrument by Swiss Bank

By Stephen Fidler, Euromarkets Correspondent

SWISS BANK Corporation has developed a new type of short-term borrowing programme for companies in Switzerland, which it describes as the "closest possible equivalent to Swiss franc commercial paper."

Unilever, the Dutch food and detergent concern, will be the first borrower to use the programme, which will be aimed at retail investors using Swiss Bank's branch network.

The Swiss market suffers from an underdeveloped short-term money market for taxation reasons. Conventional commercial paper would attract, for example, stamp duty of 0.2 or 0.3 per cent depending on maturity, enough to make it unattractive to investors.

Swiss Bank has side-stepped the problem by using book entries to record the transaction. Because no notes or certificates are issued, the programme is exempt from stamp tax. Other companies have expressed interest in using the idea, Swiss Bank says, but Swiss borrowers will not be able to tap the market because of withholding tax.

The size of the programme has not been specified. The investments will be offered continuously but will be limited initially to three and six-month maturities. There is a minimum denomination of SFr100,000. Investors in short-term Swiss francs have until now effectively been limited to bank deposits and have had no access to short-term corporate risk.

Even short-term Swiss government paper is subject to a 35 per cent withholding tax if bought by non-banks. Deposits in Swiss banks – yielding up to 2¼ per cent – are subject to withholding tax, although fiduciary deposits with banks, for placement in the interbank market, are not. They currently yield about 2¼ per cent for a six-month deposit.

●Oz Zurich Options and Futures, the company set up by BZ Bank Zurich to launch Switzerland's first stock-index option contracts, has raised its first issue to 215,000 call options, William Dullforce reports from Zurich.

The original issue of 150,000 securitised contracts announced last Friday had all been taken up by Monday.

They are based on a new OZX index, covering 11 Swiss blue-chip stocks, and entitle the holder to a cash payment in September 1990, if the index exceeds 2,500 points.

Each point of difference between the actual index and the strike price of 2,500 will be worth SFr1. The index stood at 2,234 last Thursday and would have been at 2,000 at the end of 1987.

Offered at a price of SFr300 ($214), the options will be traded on the Zurich, Geneva and Basle stock exchanges from April 21. An over-the-counter market is already operating, with the price ranging between SFr310 and SFr320 yesterday.

The OZ options have anticipated the opening of the Swiss Options and Financial Futures Exchange (Soffex), an ambitious fully electronic exchange jointly owned by the three bourses and the five big banks.

Brazil debt plan faces important obstacles

BY ALEXANDER NICOLL, EUROMARKETS EDITOR, IN CARACAS

EACH NEW financing for Brazil or Mexico, the developing world's largest debtors, is crucial for the course of Latin America's debt crisis. The $68bn bank rescheduling and loan package now being negotiated with Brazil is no exception.

Despite considerable progress made so far – especially striking when one remembers that Brazil declared an interest payments moratorium 13 months ago – important obstacles still stand in the way, bankers say.

The advisory committee of leading bank creditors hopes to complete within two weeks or so a "term sheet" outlining the proposed bank financing which will then be circulated to other banks.

Negotiations with Brazil have been conducted quietly but intensively at the annual meeting of the Inter-American Development Bank in Caracas this week and will resume next week in New York.

Before Caracas, agreement had been reached on a $5.8bn new loan amount, an interest rate of 1 percentage point over money market rates, and a 20-year maturity with eight years' grace on a $62bn rescheduling.

Many key issues, however, remain to be decided. They include:

●Will the World Bank guarantee a small part of the loan in a form of co-financing which would give banks an incentive to take part? This was done, for example, with Argentina's package last year. Banks are keen for it but governments have doubts.

●What link would there be with the agreements of other creditors? Normally, debtors negotiate first with official creditors and then with banks, whose disbursements are tied to those of the International Monetary Fund.

In this case, banks are negotiating first and IMF negotiations will begin formally next month. Moreover, the bulk of the $5.8bn bank loan will be paid out as soon as it is signed, reducing the scope for linkage. Bankers seem likely to insist that they will not pay out any money until the IMF board has approved an economic programme.

●Which banks will be asked to take part? The "base date" of exposure remains a matter of serious contention. Taking a 1982 base date, for example, as has been the practice, would mean asking banks to commit new money, although they might long ago have sold their exposure in the secondary market.

●A related question is how to deal with the problem of "free riders" – banks which do not take part in new money loans but continue to receive interest. Bankers expect new incentives to be attached to "exit bonds" which have been an unattractive option in some recent packages. Moreover, banks which refuse to take part at all may find their loans excluded from eligibility for debt/equity swaps and other forms of debt conversion.

●How will so called on-lending and re-lending programmes be structured? Such schemes, also highly contentious, enable banks to switch their loans to a more attractive borrower within Brazil.

●Will banks have the option to capitalise interest by adding it on to the principal, instead of putting up new money? This addition to the "menu of options" has yet to be discussed fully but a majority of the committee is thought likely to oppose it.

Beyond all these technical but important issues is one overriding question: Will Mr Mailson da Nobrega, the Brazilian Finance Minister, who has presided over a return to more orthodox thinking on the economy and debt, be able to carry the day at home?

He will have to implement steep cuts in government spending. He argues that "adjustment of the public sector deficit must be done, not to please banks or the IMF but because we are convinced that without adjustment there can be no economic stability."

But it remains uncertain whether, when it comes to the showdown, the former civil servant will have the backing of President Jose Sarney.

Mailson da Nobrega: Brazil's Finance Minister

Meanwhile, the minister faces an even more immediate problem. Brazil has paid January and February 1988 interest out of its reserves and plans to make the March payment when the term sheet is completed.

Mr da Nobrega, however, wants some form of temporary assistance in paying second-quarter interest, since the longer term package will not be concluded before mid-year. He does not want to deplete Brazil's reserves further. He and the banks hotly deny that a "bridge" financing is being contemplated. Bankers are hoping that their reserves position will be healthy enough to avoid the need for interim measures, especially as one interim financing agreement is already in place to find last year's interest.

It seems possible that governments and a small group of banks might be asked to help after further progress has been made on the longer-term package and in the IMF talks.

Time is very short for all these as well as other uncertainties to be resolved. Judging by the time taken to complete previous packages, it would be a remarkable achievement if a full-scale bank agreement and IMF programme were wrapped up, as is hoped, by mid-year.

MEXICO HAS announced a financial aid plan for Central America including an innovative debt relief scheme aimed at helping the war-torn countries rebuild their economies, Reuter reports from Caracas.

The plan, put to the Inter-American Development Bank by Mr Gustavo Petricioli, Mexico's Finance Minister, calls for the refinancing of $100m owed to Mexico by Costa Rica. It would use a mechanism to share the present discount on Mexico's debt.

"The idea is that the two countries take advantage of the discounts on debt in secondary markets to their mutual advantage," said Mr Angel Gurria, Mexico's Public Credit Director. Costa Rica has foreign debt of $3.8bn.

This would be the first time such a mechanism had been used between Latin American countries to settle intra-regional debts. Mr Petricioli said the scheme should be extended to other such debts and called on the IADB to help.

Hypobank bucks trend with marginal rise

BY HAIG SIMONIAN IN MUNICH

BAYERISCHE HYPOTHEKEN- und Wechselbank (Hypobank), the sixth largest bank in West Germany, confirmed its reputation as the hidden pearl in the country's banking system with a 1.7 per cent rise in group partial operating profits to DM1.08bn ($648m) for 1987, at a time when most rivals are likely to report sharply lower earnings.

Pre-tax profits at parent bank level increased by almost 5 per cent to DM530m, while net earnings were up 4.2 per cent at DM209m. The bank is paying a renewed DM12.50 dividend.

The results warranted "a certain adjective, which goes beyond good, they deserve the qualification excellent," said Mr Wilhelm Arendts, Hypobank's chief executive.

Hypobank, like its neighbour, Bayerische Vereinsbank, which reported its figures earlier this week, has benefited from its thriving mortgage lending business. Overall, group interest income rose by 6 per cent to DM2.1bn.

However, it also managed to avoid the worst pitfalls of October's stock market crash thanks to its relative weight in the bond business rather than equities. Commission income fell by only about 5 per cent to DM336m.

Hypobank reduced its credit risk provisions by 25 per cent last year against 1986. Provisions for international risks at group level exceed the 50 per cent mark, while cover for certain unspecified Latin American borrowers is "a good bit higher." Group assets rose almost 5 per cent to DM125bn.

INTERNATIONAL COMPANIES AND FINANCE

Austrian bank lifts operating results

By Judy Dempsey in Vienna

OESTERREICHISCHE Laenderbank, Austria's third largest bank, boosted partial operating profits by 43.9 per cent last year to Sch719.5m ($60.5m).

Mr Gerhard Wagner, the chairman, announced yesterday that net profits for 1987 had increased from Sch181.5m to Sch195.8m. Total assets of the banking group rose by 3.2 per cent to Sch247.3bn.

The most striking result was in the bank's capital ratio, which rose by 1.34 percentage points to 3.57 per cent, well on target for attaining the 4 per cent legally required by 1991.

Dr Wagner said the bank had not yet decided whether to raise its current share capital of Sch1.7bn, on which it is paying out a 12 per cent dividend for the latest year.

During 1987, Laenderbank continued to reduce the state's holding, from 60 per cent to 53 per cent. This came through the issue of two tranches of shares worth a nominal Sch150m and Sch50m, as well as a secondary offering.

As part of its continued expansion programme, Laenderbank tomorrow opens a representative office in East Berlin, the main aim of which will be to facilitate business transactions and contacts.

Group cash flow increased by 42.7 per cent, to Sch1.1bn from Sch719m.

Interim loss of A$509m for Ariadne Australia

BY BRUCE JACQUES IN SYDNEY

ARIADNE AUSTRALIA, the former stock market high-flier, yesterday disclosed one of the largest corporate losses the country has seen — a A$508.9m (US$376.1m) net deficit for the six months to December.

The troubled investment company has taken write-offs on its holdings exceeding A$578.2m. Unusually, it has issued a full balance sheet with its interim profit announcement. This shows a tangled web of deals including loans and put options, spreading to New Zealand and Hong Kong, which have made the group one of the hardest hit in the share market crash.

Ariadne's traumas have led to management changes at the company with Mr Bruce Judge yielding the chief executive's position to Mr Eugene Cafiero, a former Chrysler president. The company's fall from grace has also attracted Mr Larry Adler's FAI Insurances to move in with a 26.5 per cent shareholding.

Yesterday's report includes a detailed view from accountant Arthur Andersen on the company's affairs. Although it contains a disclaimer that the report is not an audit, the firm says that Ariadne can be valued on a going concern basis only if it retains the support of its bankers, mainly Bank of New Zealand. It also says Ariadne cannot trade on without large asset sales.

"The directors' estimates of net realisable value assume realisation in the ordinary course of business or in an orderly fashion," the firm says. "Such values cannot be equated necessarily with the values obtained on immediate sales. Amounts actually realised in due course are dependent on market values at the time of sale."

Arthur Andersen also makes strong mention of Ariadne's heavy borrowings, pointing to debt of more than A$1.1bn in the balance sheet and commitments and contingent liabilities of a further A$180m. "At current interest rates, this level of debt results in interest and other financing costs of approximately A$150m per annum," it says. The interest bill in the half-year rose from A$11.6m to A$20.0m.

"The nature of Ariadne's assets in its investment, property and financial services segments are such that these assets will only generate significant cash flows in the foreseeable future through the sale of assets," the firm adds.

Ariadne's industrial side, principally its Repco car parts business, "is not expected to generate sufficient cash flows to service Ariadne's debt. Accordingly, it is essential for Ariadne to sell assets in order to reduce debt to a level which can be serviced by retained business activities."

The firm says that, while Ariadne directors have decided on an orderly realisation of assets, the strategy requires the interim support of its bankers.

For some investments, Arthur Andersen expresses doubts that even written-down values could be realised.

One example given is Ariadne's 36 per cent stake in the Hong Kong-based Impala Pacific, where a provision of A$108m has been made but an additional loan of A$110m remains outstanding. Another is funds provided to Judge Corporation of New Zealand, also headed by Mr Judge.

Ariadna provided A$43m to Judge and then sold shares in the company for which it has not been paid. Arthur Andersen is investigating the transactions and Ariadne has provided A$121m against the situation.

The overall net loss compares with profits last time of A$97.8m and came despite growth in revenue to A$996.8m from A$604.4m. The result has left the company with accumulated losses totalling A$377.7m. According to directors' valuations, shareholders' funds remain positive at A$339.2m.

Mr Adler's interests now have three board seats, while two are held by a consortium including Bank of New Zealand, EIE, the Japanese property group, and the Australian-based Essington.

ABOUT 8.5 per cent of FAI Insurances passed through the Australian stock market yesterday, reflecting a disposal by Mr Joseph Gutnick, a Melbourne gold entrepreneur. The parcel, which was sold at around A$5 a share, was worth some A$95m. FAI shares jumped 20 cents to A$5.10.

Surprise payout by Hong Kong TV group

By David Dodwell in Hong Kong

HK-TVB, the Hong Kong broadcasting and entertainments group controlled by Sir Run Run Shaw, yesterday reported after-tax profits in 1987 of HK$408m (US$52.3m), a 30 per cent improvement on profits of HK$314.5m in 1986 and above most market forecasts.

Most unexpected was a special dividend of 55 cents per share, which, taken together with a final dividend of 46 cents and an interim of 18 cents, makes a total for the year of HK$1.19. This surpasses earnings per share of 97 cents and is likely to consume HK$231m out of cash reserves amounting to an estimated HK$400m.

The company made an extraordinary gain in 1987 of HK$23.3m from the sale of a stake in the South China Morning Post, the local English-language newspaper group now controlled by Mr Rupert Murdoch's News Corporation.

Although it gave no explanation for the special dividend, this will provide a substantial sweetener to Mr Alan Bond, the Perth entrepreneur who has accumulated a 30 per cent stake in HK-TVB. Mr Bond learned recently that he might have to trim this holding following a government ruling against foreign ownership of local television companies.

It is estimated that Mr Bond will receive around HK$90m in dividend payments.

TVB's profits were generated on turnover of HK$1.33bn compared with HK$1.13bn. About 70 per cent of the profits are understood to have been generated from television broadcasting operations — which include the sale of a large number of Cantonese-language programmes to Chinese communites overseas.

The remainder of the profit was generated by TVB's entertainments activities, which include printing and publishing as well as tour operating, film production, and retailing. It is understood that these operations will have to be hived off from the main group, possibly over the course of the coming year.

NZ plans insider trading law

BY DAI HAYWARD IN WELLINGTON

NEW ZEALAND yesterday introduced plans to legislate against insider trading and improve disclosure requirements.

Insider traders could lose their position in a company or, if in a stockbroking firm, be disqualified from practising. Investors suffering a loss through the activities of an insider trader will have a legal right to compensation.

Mr Geoffrey Palmer, the Justice Minister, said he did not think it was possible to eliminate insider trading completely. However, New Zealand had to lose its reputation of being "the last Wild West show."

He added: "The New Zealand market has been described by some as the last frontier of those who wish to manipulate the price of shares for their own gains. These changes are going to bring that situation to an end."

It was important to have a fair market in which people had a reasonable chance of knowing what was going on and making rational decisions.

The new laws closely follow the recommendations of the Securities Commission, which was ordered by the Government last year to investigate the operations of insider traders.

Companies are now also required to disclose their holdings when they obtain a substantial shareholding, of more than 5 per cent, in a listed company.

Mr Palmer said the reputation of New Zealand's financial markets had been damaged by some of the practices which had occurred but the new legislation would help restore confidence.

Some market observers believe that, had greater controls over insider trading been in force before October, some of the secret deals which have been revealed since the share crash would not have been possible.

Monsanto Australia disposal

By Our Financial Staff

MONSANTO AUSTRALIA, part of the US chemicals group, is to sell its commodity chemicals, plastics and resins businesses to Mr Kerry Packer's Consolidated Press Holdings.

No price was disclosed for the deal, which leaves Monsanto Australia with its agricultural chemical and specialty chemical operations. The company has ranked as one of Australia's largest chemical producers and the country's biggest exporter of chemicals.

Monsanto said the sale was part of a worldwide policy of concentrating on agricultural products and specialty chemicals while focusing development on pharmaceuticals, biotechnology, process controls and electronic materials.

The businesses bought by Mr Packer's privately held publishing and investment group will operate under the name Chemplex Australia and will be run by existing management. The sale includes Monsanto's holdings in Australian Fluorine Chemicals, Revinex Australia and Revertex Industries (NZ).

Singapore group to make rights issue

UNITED OVERSEAS Land (UOL), a property and hotel associate of Singapore's United Overseas Bank, is seeking to raise up to S$132m (US$65.5m) through a one-for-two rights issue, Reuter reports from Singapore.

The company announced this yesterday, together with a net deficit of S$8.44m for 1987 against profits of S$8.46m in 1986. Turnover dropped by 22 per cent to S$61.55m.

The rights issue is priced at S$1.10 a share. UOL shares fell 10 cents on the news to close at S$1.37. The company said proceeds would be used to "reduce bank borrowings and to take advantage of investment opportunities that may arise."

The offer carries detachable transferable subscription rights which entitle the holder to subscribe over a five-year period for another UOL share at S$1.10. The rights will not qualify for the unchanged one cent dividend for 1987.

UOB and Orient Leasing of Japan, both substantial shareholders in UOL, have agreed to take up their entitlements. The balance will be underwritten.

Koppers raises $1bn to buy shareholder loyalty from Beazer

BY JAMES BUCHAN IN NEW YORK

Koppers, the Pittsburgh-based aggregates and chemicals group that is fiarcely resisting an aggressive $1.6bn (£871.69m) bid from Beazer of the UK, said yesterday that it had lined up more than $1bn in financing to win the loyalty of its shareholders with a big cash pay-out.

In e statutory filing in Washington yesterday, the group said that two banks had offered to arrange a $1.13bn credit facility and would put up $600m themselves to help finance a special cash dividend. Koppers would not identify the banks.

The announcement, which adds credibility to Koppers' promise to make a counter-offer to stockholders and remain independent, sent Koppers stock up $⅝ to $57⅝.

Wall Street investors believe thet Koppers can probably top the $56-a-share offer unveiled at the weekend by a group led by Beazer, the Bristol-based aggregates and housebuilding group. Included in the group are Shearson Lehman Hutton, the Wall Street investment firm, and Nat-West Investment Bank.

Professional takeover speculators (or arbitageurs), said yesterday that they believed Koppers could now finance e special cash dividend of $38 or $39 a share. They believe that stock in the company, which will be massively indebted because of the pay-out, will fall in value to $15-$20.

"The offer is competitive with the current Beazer offer," said one arbitrageur. "But it is not competitive if Beazer goes to $60, which we think it can do."

In Pittsburgh yesterday, feeling ran high among Koppers employees against the Beazer group's bid. In protest against the involvement of Shearson, a subsidiary of American Express, a group of employees cnt their American Express cards in half and mailed the pieces to Mr James Robinson, chairman of the financial services group.

Pearson in talks with Spanish financial paper

BY RAYMOND SNODDY

Cinco Dias, the Spanish financial daily confirmed yesterday that it was discussing the sale of a 44.5 per cent stake in the paper with a number of European publishing groups.

The company said it was discussing the sale of a stake with Pearson, the publishing, banking and oil services group which owns the Financial Times, Hachette, the French publishing group and two other French companies it declined to name.

A spokesman for the paper which has a circulation of 24,000 said its founder Mr Francisco Gaya wanted to sell half his 89 per cent stake in Estructura Grupo de Estudios Economicos, the newspaper's holding company.

Two Spanish entrepreneurs Mr Alberto Cortina and Alberto Alcocer currently hold the balance.

It is believed that Mr Robert Maxwell, publisher of Mirror Group Newspapers, at one time expressed an interest but talks were broken off some time ago.

Plessey raises Leigh offer

BY DAVID THOMAS

Plessey has increased its friendly offer for Leigh Instruments, a Canadian defence electronics manufacturer, which is also the subject of a hostile bid from IMP, a Canadian aerospace manufacturer.

Plessey has increased its offer from C$25.35 to C$29.25m per preference share. With its offer per ordinary share remaining uochanged at C$6.50, Plessey says the total value of its offer has increased from £43.8m to £45.2m.

Plessey says its offer is now higher than IMP's by C$0.25 per ordinary and C$2.25 per preference. The inward investment authorities in Canada have given Plessey the go-ahead to proceed with its offer.

Plessey's amended offer requires that the aggregate of ordinary and preference shares accepting the offer is only 50.1 per cent, as against 66.6 per cent of each class of share under the original offer.

DIVIDENDS ANNOUNCED

	Current payment	Date of payment	Corres-ponding div	Total for year	Total last year
Aurora ....fin	2.15	-	1.25	2.75	1.75
Barker (Charles) ....fin	2.1†	May 26	2	3.2	3
Barker & Dobson ..fin	2†	-	1	3.5	1
Barratt Devs ....int	2.79	May 27	2.54	-	8.93
BAT Industries .....fin	10.4	-	8.8	16.9	14.3
Breedoo ....fin	4.35	May 27	4*	6.35	5.62*
Britannia Arrow ...fin	3.2	May 21	3.2	5.5	5
Britannic Ass. ....fin	27.5	-	24.5	42	35.5
British Mohair ......fin	6.1	May 31	5.25	7.5	6.5
CLF Holdings ....fin	1.16†	May 4	0.9	1.74	1.35
Campari Int ....fin	5†	May 28	2.5	6.5	3
Christy Hunt ....int	0.33	June 30	-	-	0.4
Computer People ...fin	2.4	May 27	-	3.6	-
Cundell Group ......fin	2.25	May 20	-	2.25	-
Delaney Group ......fin	2.2†	May 23	1.8	3.3	2.7
Early's of Wit. ....fin	1	-	1	1.315	1.315
Falcoo Inds ....fin	0.75†	-	-	0.75	nil
Gordoo Russell .....fin	4†	-	-	6	-
Hepworth Ceramic.fin	6.3†	-	5.18	9.9	8.28
Matthews (Bern.) ...fin	1.13	-	1.13*	1.75	1.75*
Meggitt Holdings ...fin	1.5†	June 10	1.25	2.25	1.75
Northern Engin. ....fin	3.6†	-	3.6	5.25	5.25
P-E Int'national .....fin	2.4†	May 31	2	3.6	3
Randsworth Tst §...int	1	May 27	-	-	1
Reotokil Group .....fin	2.08	-	1.78	3.28	2.8
Rotork ....fin	3.85	-	3.8	7.1	6.5
Schroders ....fin	10.5	-	10.5	16.5	13.5
Silkolene ....fin	5	May 16	3	9	6
Stag Furniture ......fin	4.25	May 19	3.75	6	5.5
Sunleigh Elect.§ .....fin	0.38†	-	0.25	0.56	0.38
Tibbett & Britt. ......fin	3	May 24	2.3	4.5	1.5
Tootal Group ....fin	2.8	-	2.65	4.5	4.25
Trade Indemnity ...fin	3.4	May 19	2.45	5.6	4.3
Usher (Frank) § .....int	2	-	-	‡	5.5
Woolworth Hldgs ..fin	6†	July 4	5.5	9	8

Dividends shown pence per share net except where otherwise stated. *Equivalent after allowing for scrip issue. †On capital increased by rights and/or ecquisition issues. §USM stock. §§Unquoted stock. ¢Third market. ‡ 8p total for 16 month period forecast.

Dobson Park lifts MS stake to 25.9%

By Clay Harris

Dobson Park Industries yesterday bought another 3.3 per cent of MS International to raise its stake to 25.9 per cent. The bitterly contested takeover battle between the two diversified mining equipment manufacturers closes tomorrow.

Dobson Park, meanwhile, last night made a formal complaint to the Takeover Panel about the role of stockbroker Citicorp Scrimgeour Vickers, which the bidder believes should be declared as an associate of the MS defence.

Mr Chris York of Scrimgeours said on Tuesday that Citicorp discretionary clients holding about 15 per cent of MS were unlikely to accept the Dohson Park bid. Mr York has followed MS closely from the days when he worked for its broker, McCaughan Dyson Capel Cure.

Although MS defence documents have quoted his anti-bid circulars, the connection has not been mentioned.

Both sides yesterday issued exhortations to MS shareholders which broka no new ground. MS shares closed unchanged at 129p, 1p below the cash offer price.

Budgen the spur for B&D's growth

BY NIKKI TAIT

Barker & Dobson, the food retailer and sweets group which last month lost an ambitious £2bn bid for Dee Corporation, yesterday reported pre-tax profits of £13.5m in the year to December 26.

This compares with £4.15m in the previous year, and is scored on sales up from £127.1m to £277.8m. During 1987, B&D enjoyed the first full-year contribution from the Budgen supermarket chain, which it acquired in mid-1986. In 1986, Budgen's figures were included for only five months.

During 1987, the food retailing operations made operating profits of £11.86m on sales of £243.5m (£94.5m), with an operating margin of 4.87 per cent. B&D undertook 21 major refurbishments in 1987, and opened three new stores.

On the confectionery side, there was an operating profit of £1.62m (£1.41m) on sales of £36.7m (£34.1m). The pre-tax figure also takes in £1.87m of property profits.

The interest charge last year was £547,000 (£484,000). At the year-end, gearing ran to 52.8 per cent - but that partially reflected some refundable payments made in connection with the Dee bid. The Dee-related factors aside, gearing would have run out at about 16 per cent. Tax is £2.47m (£437,000).

Below the line, Barker & Dobson bears a £2.7m extraordinary charge — £2.45m reflecting the costs of the Dee bid.

The final dividend, however, goes up from 1p to 2p, making 3.5p (1p) for the year. The year-end is being changed to end-April.

● comment

Having forecast et least £13m before tax during its battle for Dee, Barker & Dobson caused few surprises yesterday. Most analysts agree that Mr Fletcher still has plenty of scope in rolling out tha Budgen programme, and another 28 full refurbishments are likely in the current year - in addition to ten new stores. In comparable stores, meanwhile, volume gains accounted for the bulk of last time's 8.8 per cent rise, with price inflation chipping in only 1 per cent. Where B&D goes next, however, is a moot point. The availability of potential store sites is not seen as a major problem et preseot, but whether extending Budgen will contain Mr Fletcher's energies is more doubtful. Although he plays down immediate speculation, the experieoce of the Dee bid is unlikely to have dented amhitions and shareholders can probably be guaranteed an eventful ride.

Peachey buys EPIC stake

Peachey Property Corporation, which raised its contested cash offer for Estates Property Investment Company (EPIC) from 240p to 260p a share on Monday, announced yesterday it had bought a 25 per cent stake in EPIC from London Securities, itself an erstwhile predator, writes Andrew Hill.

The shares were already committed to the Peachey bid, but the sale gives Peachey ownership of about 33.1 per cent of EPIC's share capital. Under the rules of the Takeover Code it also means Peachey must declare the offer unconditional once it has acquired 50 per cent of EPIC.

A total of about 39.2 per cent in equity and acceptances is committed to the Peachey offer, which closes on April 12.

Within half an honr of Peechey'e announcement, EPIC reported that it had "reached an advanced stage" in discussions with a company prepared to offer a higher price. Peachey's final increased offer values EPIC et £63.4m. On Monday EPIC advised shareholders to wait for the outcome of talks with potential offerors.

EPIC shares rose 8p to close at 265p and Peachey eased 1p to 412p.

Rotork falls to £5.6m

DISAPPOINTMENTS at Rotork's instrumentation subsidiary Protech led to reduced pre-tax profits of £5.64m for the year ending December 31, against £6.32m in 1986, writes Andrew Hill.

The Bath-based manufacturer of valve control equipment, machine tools and cables said the volume generated by Protecb's distribution of Toshiba's Tosdic range of computer instrumentation failed to compensate for the completion of work on two nuclear contracts.

Poor performances from Lndlam Sysco, the process engineering operation, Jacques, undersea cable and hose manufacturer, and Evans, maker of laminating machinery, also contributed to the drop in profits.

Turnover rose slightly to £34.2m (£33.2m). Earnings per share fell to 12.4p (13.9p).

Mr Jeremy Lancaster, chairman, said he believed the strategy of integrating Rotork Controls' sales network with the marketing efforts of Protech and Ludlam Sysco would bring considerable benefits in the next few years.

The proposed final dividend of 3.85p, making 7.1p (6.5p) for the year, reflects the company's cautious confidence in 1988.

Midsummer pays £6.6m for Bruce's Brewery

By Lisa Wood

Midsummer Leisure, the rapidly expanding public house, snooker club and discotheqne business, is buying Bruce's Brewery, the small chain of pubs in the London area with names like Frog & Firkin and Flounder & Firkin, for £6.6m cash.

Bruce's Brewery, set-up in 1979 by Mr David Bruce and Mrs Louise Bruce, was put on the market last month.

The 11 pubs and one site for development were put out to tender, with the brand names Bruce's Brewery and Dogbolter – its potent beer – offered separately. Bids were due in by April.

Midsummer Leisure – which last year made an unsuccessful informal takeover approach to Boddington, the Manchbester brewer – made its pre-emptive move for the pubs, plus the brand names, which was accepted by Mr Bruce.

Midsummer has more than 130 outlets, and reported e pre-tax profit of £2.33m on turnover of £17.52m for the year ended September 30 1987. Bruce's Brewery, for the year ended March 31 1987 showed a pre-tax profit of £151,000 on turnover of £2.97m. The value of the net tangible assets acquired, based on the March 31 1987 accounts, is £2.8m.

WEAK DOLLAR AFFECTS US EARNINGS AND STOCK MARKET CRASH HITS EAGLE STAR

BAT shows marginal rise to £1.4bn

BY NICK BUNKER

THE TOBACCO-based multinational BAT Industries yesterday unveiled only a marginal rise in its annual pre-tax profits to £1.394bn, but brushed aside doubts of its ability to take over Farmers Group, the US insurer.

BAT has launched a $4.5bn (£2.5bn) contested tender offer for Los Angeles-based Farmers, in an attempt at strategic expansion into US financial services.

Mr Patrick Sheehy, chairman, dismissed suggestions that the group faced resistance from state insurance regulators. Queries raised by state insurance commissioners were "fair and reasonable" and had been expected. "We anticipate that we will be able to answer them to the complete satisfaction of the states".

Worldwide, BAT's pre-tax profits in the 12 months to December 31 were up a mere £1m on the 1986 figure, largely because a weak dollar hit its US earnings and last October's stock market crash hurt the results of Eagle Star, its UK composite insurance subsidiary.

In what appeared to be another move aimed at boosting confidence in its capacity to acquire Farmers, the group laid a heavier than usual stress on its strong balance sheet and the positive cash flow from its tobacco operations.

Though BAT's cigarette market share in the US fell further, from 11.7 per cent to 11 per cent, tobacco continued to contribute 50 per cent of its £1.485bn trading profits, the same proportion as in 1986.

Mr Sheehy said net interest charges in 1987 had fallen from £88m to £1m, and gross borrowings were down to 34 per cent of shareholders' equity, or 10 per cent after taking cash balances into account. The debt/equity ratio was now "the lowest since 1969," when BAT was starting to diversify out of tobacco via a string of acquisitions.

After a tax charge almost unchanged at £526m (38 per cent) and minorities of £81m, profits attributable to shareholders were £787m. Earnings per share dropped one per cent to 52.78p, but BAT said its "underlying strength" enabled it to raise the total dividend 16 per cent to 16.9p.

The biggest snag for BAT was the weakening US dollar. If end-1986 exchange rates had been maintained, pre-tax profits would have been £192m higher. The US made up 27 per cent of group turnover of £17.2bn (£19.17bn).

Pre-tax profits fell in BAT's paper and retailing operations, both of which have heavy US exposures. Paper contributed £209m (£217m), while retailing was down £211m to £203m.

The second factor depressing the pre-tax earnings was a drop from £282m to £265m in profits from financial services. At Eagle Star, pre-tax profits grew only three per cent to £210.5m, partly due to a drop from £313.2m to £285.9m in its total investment returns due to October's equity market crash.

The crash meant that over the year as a whole its non-life insurance funds declined by £31.6m, but this meant a fall in pre-tax earnings because Eagle Star takes unrealised capital gains and losses into its profit and loss account.

Eagle Star was also hit by a net £16m of claims from last October's hurricane, and by the need to add £22.1m to reserves for its liability insurance business.

See Lex

Takeover operations strengthen Schroders

By Clay Harris

Schroders, the financial services group, increased its disclosed after-tax profits by 29 per cent to £27.13m in 1987. Mr George Mallinckrodt, executive chairman, described the result as "a considerable achievement in a year of volatile market conditions."

Disclosed earnings per share matched pre-tax growth with a 29 per cent rise to 86.3p (67p). An unchanged final dividend of 10.5p gives a total 22 per cent higher at 16.5p (13.5p).

The profits increase from £20.97m, after transfers to inner reserves, reflected a strong performance by corporate finance operations, especially in cross-border mergers and acquisitions. Schroder Wagg, the merchant bank, also increased its share of the UK mergers and acquisitions market.

Funds under management rose by £500m to a record £15.5bn, an advance limited by the decline of the dollar. The weakness of the US currency reduced the group's disclosed overall profits by £2.8m.

Concentrating capital markets operations on equity and equity-linked issues, Schroders achieved increased underwriting profits despite a £2m loss on the BP issue.

Securities operations, both in the UK and overseas, lost money, although the Hong Kong branch gained market share dramatically in the flight-to-quality after the October crash. Significant costs were incurred in Japan in the run-up to Schroders' forthcoming Tokyo Stock Exchange membership at the end of June.

In the UK, Schroders has decided to concentrate on research, market-making and trading in smaller companies, especially those whose flotation it has sponsored.

Treasury operations have been able to capitalise on volatile post-crash interest rates, and Wertheim Schroder, the US-based investment bank partnership, made a material contribution to profits.

Sales and swaps of problem overseas loans, as well as further provisions, reduced exposure — net of provisions — to 0.6 per cent of total assets, or about £18m. This compares with a level of more than 2 per cent at the previous year-end.

● comment

Is Schroders too good for its own good? Disclosed profits below forecasts is being taken, not unreasonably, as evidence that more than usual has been salted away against a less happy result for 1988. After all, this is one purpose of the inner reserves for which Schroders will fight longer than most. Even on a fall to £26m post-tax, however, the prospective p/e of 11.4 is the highest in the sector. This reflects confidence in the ultra-conservative approach as well as disclosed asset backing of close to £7 a share, against an unchanged market price of 965p. But family control excludes bid speculation, and organic performance alone is unlikely to keep the shares at a premium. Schroders needs somehow to repeat the earnings-enhancing effects of the 1986 insurance disposal and 1987 entry into the Wertheim partnership. Perhaps it could apply those cross-border M&A skills to its own case, with special attention to continental Europe, the only area where it could be accused of being too thin on the ground.

Woolworth surges £32m but warns on conditions ahead

BY MAGGIE URRY

A WARNING of tougher competitive conditions in UK retailing accompanied Woolworth Holdings results for the year to January 30.

Mr Geoffrey Mulcahy, group chief executive, announced a profit before tax and exceptional items of £147.2m, up from £115.3m, and said "we are now entering an era when trading conditions across the retail sector will be tougher." However, he was confident that Woolworth would be one of the winners.

He said that Woolworth would be taking competitive action to increase market share and strengthen its brands. It would also cut costs, make better use of its retail space and develop new businesses.

During 1987-88, the fifth year since the current management took over at Woolworth, sales across the group rose by 18.8 per cent to £2.17bn and trading profit by 25.3 per cent to £183.4m.

Mr Mulcahy said that all parts of the group increased profits and the retail operations expanded their market share. B & Q, the out-of-town do-it-yourself chain, raised trading profits by 32.3 per cent to £60.2m. Profits at Comet, the electrical chain, rose from £17.4m to £20.1m despite difficult trading conditions as overstocked retailers cut prices.

In the high street, the Woolworth chain made a profit of £45.1m, up 16.5 per cent, despite a 10 per cent reduction in sales area as space was put to better use. Superdrug, acquired a year ago, contributed £13.0m to profits in the nine months up to the year end. The two further acquisitions, Tip Top and Share Drug, are now being integrated with Superdrug.

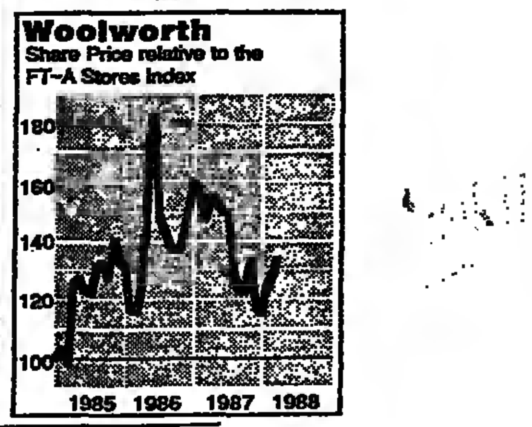
Mr Mulcahy said the group's property portfolio was now worth over £800m, with the budget change in the capital gains tax base date to 1982 worth £100m. Profits from the property businesses totalled £52.4m (£49.4m). They included a first time £6.9m from development.

An exceptional credit of £29.8m was the balance of sale and leaseback proceeds and a £5m cost involved in converting some Woolworth space into Superdrug stores. Higher debt levels pushed up the interest charge to £36.2m (£31.1m).

After tax of £37.6m (£30.5m) earnings per share on a fully diluted basis, and excluding the exceptional item, rose 13.3 per cent to 23.9p (21.1p). A final dividend of 6p net is proposed giving a total for the year of 9p (8p).

See Lex

Geoffrey Mulcahy, chief executive (left) and Sir Kenneth Durham, chairman: group property portfolio now worth over £800m.



CRH in US joint venture

By Dominique Jackson

CRH, Dublin-based building materials group, announced yesterday that it had entered into a joint venture with US company, Georgia Asphalt and Paving, to acquire Pike Industries.

Pike, a New England based aggregates, asphalt and paving producer, is being acquired for a total of $77m (£42m) by Pike Holdings, a new company which is jointly owned by CRH and Georgia Asphalt.

CRH, formerly Cement Roadstone Holdings, is investing $11m in equity and preferred stock in Pike Holdings, through its US subsidiary, Oldcastle.

In addition to returns on this equity and preferred stock, CRH will also receive fees for any management services provided and a positive contribution to CRH earnings per share is anticipated.

CRH also has an option to acquire Georgia Asphalt's interest after five years, according to a formula based on future profits.

The companies which currently comprise Pike had external sales of $85m in 1987. The company has recently invested $5m in a new stone crushing line and $10m in four asphalt plants.

Tootal lifts profits by 33% and plans £54m rights issue

BY ALICE RAWSTHORN

Tootal, the textile group, yesterday unveiled plans for a one-for-four rights issue to raise £54.2m. Part of the money raised will be used to take sole control of Lantor International, the industrial textiles concern, and to fund a second joint venture for thread in China.

The group also announced a 33 per cent increase in pre-tax profits to £40.3m in the year to January 31 on turnover which rose by 23 per cent to £504m. Earnings per share increased by 9 per cent to 11.34p, or by 34 per cent excluding a special dividend in 1986/87. The board proposes a final dividend of 2.8p making 4.5p (4.25p) for the full year.

Mr Geoffrey Maddrell, chief executive, said that after a successful trading year the group was now in "good shape" and was ready to move into a "new phase of expansion" into areas of high growth.

Tootal set up Lantor in 1956 as the managing shareholder in a joint venture with West Point-Pepperell of the US. Lantor manufactures non-woven textile products for use in industry and in medicine.

Mr Maddrell described Lantor as a "fast growth business and one which we know inside out." Tootal will pay up to $38m (£20.7m) for the remaining 49.9 per cent of the company.

In order to finance the acquisition Tootal is issuing 55.3m new shares, on a one-for-four basis, at 98p a share. Its shares fell by 9p to 108p yesterday. In addition to funding the Lantor deal, the money will be used to develop the thread, office supplies and clothing businesses within Europe.

The cash will also finance the group's $5.5m investment in a second Chinese joint venture, to establish a new thread yarn mill in northern China.

Mr Maddrell identified the US and Far Eastern thread businesses as successes in the last financial year, both regions benefited from the availability of low cost yarn from China. Profits from the UK and Australian thread interests fell due to reorganisation. Similarly the contribution from clothing and homewares was reduced due to restructuring.

The other divisions — office supplies, specialised materials (chiefly Lantor) and international sourcing — all performed well.

● comment

Tootal has issued so many shares in the past year or so...first to pay for Sandhurst, then Standard-Coosa-Thatcher-that this rights issue was far from timely. That said the chance to snap up Lantor — and on so attractive an exit p/e of 12 — was too good to miss. Industrial textiles is exactly the type of high growth, global business that Tootal wants to balance its traditional textiles. Moreover, having freed Lantor from WPP, it can now make much more of the US. As for the established interests. The success of S-C-T seems to have solved Tootal's persistent problems in American Thread. And the impact of cheap Chinese yarn on its US and Far Eastern thread margins is entirely encouraging. ESL and clothing apart, the progress of the rest — especially office supplies and international sourcing — augurs well. The City expects pre-tax profits of £45m and a prospective p/e of 8½ this year. Tootal may thus be just cheap enough to stop the issue of so many more shares from dampening down its price.

Hodgson pays CWS £8m for six funeral businesses

BY ANDREW HILL

Hodgson Holdings, the UK's second largest funeral director, has bought six Scottish funeral businesses from the Co-operative Wholesale Society for £7.8m.

The purchase will be funded by a £20m share placing, which will also provide cash for further small acquisitions later in the year.

The Monopolies and Mergers Commission told the Co-op, the UK's largest funeral company, to sell the businesses, which it had acquired from House of Fraser last June.

Mr Howard Hodgson, chairman of USM-quoted Hodgson, outbid about 30 interested parties, including quoted rivals Great Southern Group and Kenyon Securities, in a controlled auction.

The acquisitions greatly increase Hodgson's market presence in Scotland, and boost the number of funerals the group can perform in a year to about 35,000, compared with 27,000 at the October year-end.

The conditional placing of new ordinary and convertible preference shares will repay existing borrowings and provide the group with about £9m cash to spend on further acquisitions.

Four funeral directors were bought from the Co-op: Gordon & Watson in Aberdeen; Strang & McLagan in Perth and Crieff; JC Williamson in Perth; and William Scott in Falkirk.

On news of the placing, Hodgson shares closed down 13p last night at 235p.

Cundell advances by 33%

AFTER a year of growth and substantial change Cundell Group reported a 33 per cent increase in pre-tax profits, from £2.05m to £2.73m. The company, which makes corrugated packaging, came to the market last April.

A dividend of 2.25p is recommended for the year. Earnings rose from 10.9p to 11p.

Turnover rose to £34.9m (£29.52m) and sales for the first quarter of 1988 were ahead of the corresponding period.

Jones Shipman profits setback

Jones & Shipman, manufacturer of high precision machine tools, announced yesterday a sharp fall in pre-tax profits to £522,000 for the year to end December 1987 from £2.3m the previous year.

The company attributed the fall to a lower level of demand in the machine tool industry and to continued costs incurred in developing a new range of products to operate under electronic control systems.

Mr Frank Brooks, chairman, said the development programme was vital to ensure the company continued at the forefront of grinding and honing machine tool technology.

Approximately £1m of development costs was charged against profits this year and a similar amount would be required in 1988.

The directors recommended a final dividend of 3p per ordinary share, making a total for the year of 4.15p, unchanged from 1986.

Mr Brooks said he would retire from the board with effect from the end of the forthcoming Annual General Meeting

Mr Leonard Weaver was co-opted to the board on March 21as non-executive director and chairman designate.

Stag Furniture doubles profit

Doubled pre-tax profits are reported by Stag Furniture for 1987 from £755,000 to £1.55m on turnover up 11 per cent from £30.56m to £33.97m. An increased final dividend of 4.25p (3.75p) is recomended, for a total of 6p (5.5p).

Mr Patrick Radford, chairman, said both the Stag and Jaycee brands had increased their market share.

Delaney grows 72%

Delaney Group, Birmingham-based furniture manufacturer, pushed pre-tax profits for 1987 to £2.7m, a 72 per cent rise on the restated figure of £1.58m for 1986. Turnover rose to £20.51m (£14.47m restated).

The directors have recommended a final dividend of 2.2p (1.8p) making a total for the year of 3.3p (2.7p).

Gordon Russell

Another strong year at Gordon Russell Furniture saw pre-tax profits rise 45 per cent from £1.81m to £2.62m on turnover of £16.61m (£24.41m).

The company manufactures office furniture.

A final dividend of 4p is proposed, making a total of 6p.

UK COMPANY NEWS

Plastics and heating help boost Hepworth Ceramic

BY MICHAEL SMITH

Hepworth Ceramic, the heating and building products company, yesterday announced that pre-tax profits rose 47 per cent to £60.23m in 1987. Earnings rose 24 per cent from 17.19p to 21.34p.

The company also announced plans to start making quality facing bricks through a £10m investment in a disused factory in Ellistown, Leicestershire. It is aiming for revenue of £10m in 1989 and a 1 per cent share of the market.

Hepworth, as the company will be called after approval at the annual meeting, increased sales by 15 per cent from £362.42m to £415.4m in 1987. Leaving aside companies sold or bought during the year, real growth was about 10 per cent with volume gains accounting for about 6.5 per cent.

Mr Sinclair Thomson, chief executive, said that about half of the £19m growth in pre-tax profits was organic, the rest came from contributions from acquisitions less disposed companies.

Profits from clayware and sands, the largest two divisions, were static at £23.7m and £12m, but refractories made £10m - £4m more than 1986, and plastics surged from £1.5m to £4.1m.

Plastics enjoyed buoyant market conditions and increased market share. Refractories were helped by a £600,000 contribution from acquisitions and by tha strong performance of British Steel, which takes about 30 per cent of output.

The year started with £7m debt and ended with £40m of cash. Mr Thomson said the cash from disposals and acquisitions balanced each other. The turnround resulted from about £20m of increased profits, £20m of improvements in working capital, including stock reductions, and £7m of miscellaneous.

Following the acquisition of Henderson Group, Hepworth will have debt of about £40m. Year-end gearing is likely to be less than 25 per cent, its says.

An extraordinary charge of £1.94m was mainly closure costs.

Hepworth announced a final dividend of 6.3p (5.18p) to make a total of 9.9p (8.28p).

● comment

The flat performance of the sands and claywares divisions would have been a setback two years ago; but yesterday the company could shrug off its two largest divisions' stagnation and see its shares rise 5p to 250p. The market was mnch more interested in plastics and heating, the areas where the management, in place for 18 months, is showing its value. Improved marketing and stripping out of overheads was behind tha dramatic improvement in plastics and the benefits will continue into this year, making £6.5m achievable. But it was the heating division's performance which warmed analysts' hearts. Its eight-month contribution of £8.7m converts into an exit p/e of about 7. The Henderson acquisition will be rather more expensive but Mr Thomson says there will be no dilution even in the first year. Assuming Henderson merely washes its face this year the City expects at least £73m, putting the shares on a p/e of about 10. That leaves little room for outperformance in the next few months bnt the shares would start to move if Hepworth could demonstrate quick progress on Henderson.

Rentokil advances to £38m

BY FIONA THOMPSON

Rentokil, the environmental services and property care group, yesterday reported a 20 per cent increase in 1987 pre-tax profits from £31.27m to £37.59m. Earnings per share rose 24 per cent to 11.86p (9.6p).

Currency fluctuations held hack profits hy £1.4m for the company, which operates in 36 countries. Profits from UK companies totalled £23.24m while the overseas businesses contribnted £14.35m.

By division, the bulk of profits – £32.73m – came from environmental services, up from £28.33m in 1986. This includes the provision, on a one-off or renewable contract basis, of a number of services to industry and commerce. These include pest control; office cleaning; hygiene services – ranging from unblocking drains to installing electric fly killers; Sanitact, which disposes of sanitary towels, and Sharps, which collects and incinerates surgical instruments; and the supply and maintenance of plants at work.

The property care division, whicb includes woodworm and dry rot treatment, damp proofing, timber preserving, insulation and insurance activities, contributed £4.86m (£2.94m).

While the contribution to profits of the eight companies acquired in 1987 was fairly small, the 20 companies bought in 1986 contributed about £1.5m.

Turnover rose from £166.9m to £174.01m. A final dividend of 2.075p makes a 3.275p (2.8p) total.

● comment

These results were pretty much in line with City expectations and the shares closed 4p down at 196p. Property care profits – after substantial rationalisation of UK operations – sharply improved from the difficult patch in 1985/86 following the virtual disappearance of local authority grants. Margins are edging ahead in environmental services and although pest control in the UK is reasonably mature, there are strong growth prospects in the Sanitact and Sharps disposal businesses. With net cash of just under £28m, Rentokil will be keeping a keen eye out for acquisitions. Overseas the scope for expansion continues but so does the battle with currencies, a not insignificant worry. Pre-tax profits forecasts of £44m for this year produces a prospective p/a of about 14, a good premium to the market.

Sluggish Aurora lifts dividend

BY DAVID WALLER

Aurora, tbe Sheffield-based engineering group, reported a £445,000 increase in pre-tax profits to £11.48m. Turnover rose by £699,000 to £112.08m.

The dividend for tbe year is to be raised by 57 per cent to 2.75p following a 2.15p final payont, reflecting what tbe company termed a "more progressive" dividend policy. Earnings per share advanced from 8.54p to 9.26p.

Trading profits rose by just £95,000, to £11.46m. Mr Andrew Wallis, finance director, said the sluggishness of the growth was in part attributable to problems at Osborn-Mushet, the company's cutting-tool subsidiary.

Fierce competition and cost-cutting measures had combined to reduce profits by almost £1m, he said.

The order book is now 18 per cent higher than it was a year ago; net cash balances and short-term investments exceeded borrowings by £6.7m at year end.

There is now negligible gearing following the acquisition of Westpark for £8.5m, but it is possible that cash resources will soon be swollen by the finalisation of the £15m sale of the Edgar Allen Foundry site in Sheffield.

● Comment

Aurora has made an impressive recovery from near catastrophe in 1983, but yesterday's figures suggest that the group has reached a profits plateau after four years of rationalisation and cost-cutting. It seems that margins, once above 10 per cent, just cannot be squeezed any further, and it becomes necessary to make acquisitions. With virtually no gearing, even after the net £8.5m paid for the industrial valve company, Westpark, in January, the balance sheet is strong enough to support more purchases – and will be further fortified when the Edgar Allen site is finally sold at an estimated profit of £10m, after allowing for the cost of building a new foundry. Assuming no repeat of problems at Osborn-Mushet, the company should make £13m this year putting the shares on a prospective p/e of 9½. Fair on trading grounds alone, but investors' attentions are likely to be focussed on the stake-building activities of Australian National Industries, the Antipodean engineering conglomerate which has taken its holding in Aurora from under 5 to nearly 22 per cent since Black Monday.

Nikki Tait looks at the background to Framlington's defence against Throgmorton

The scene of a serious family bust-up

UP ON THE seventh floor of a Finsbury Square office block sits Mr Bill Stuttaford, managing director of the medium-sized but well-respected fund management group, Framlington. A few steps along the corridor are his colleagues Panl Loach and Bob Seabrook, fellow directors of Framlington but also on the board of Throgmorton Trust, a £327m investment trust.

The twist is that Throgmorton is bidding £66.3m for Framlington, and Framlington, as its statement made clear yesterday, does not like it.

The situation – certainly the proximity of the combatants – must be without parallel. Indeed, visitors to Framlington have the curious experience of finding in the central reception area details of the bid sitting alongside publicity material for the group's investment and unit trusts.

True, City bust-ups are invariably complex and insular, involving strings of allegiances in a closely-knit community. Seldom, however, does brother attempt to attack sister.

The relationship between Framlington and Throgmorton is clear enough.

Framlington was born in the late 1960s when partners in stockbroker Laurence Prust, including Mr Stuttaford, formed a unit trust company. For 15 years, this business grew nicely – particularly on the back of a higher public profile in the mid-1970s, when Dewe Rogerson's Tim Miller stepped on board as marketing director.

However, by the mid-1980s the Laurence Prust links were posing a problem, despite the fact that some Framlington shares had been placed out on the USM.

Mr Stuttaford, wearing his Framlington hat, remembers being visited by one Oxford college who wanted a fund manager; all he could offer was unit trusts. Another pension fund turned up on Laurence Prust's door-step and specifically asked for a unit trust portfolio.

Moreover, tha pre-Big Bang marriage whirl was underway, and Laurence Prust, not unnaturally, saw the advantages. After talks with a number of potential partners, it came to an agreement with Credit Commercial de France, the large nationalised French banking group.

CCF took control of the institutional equity/corporate finance side, and acquired a 28.8 per cent interest in Framlington. Into Framlington went Laurence Prust's discretionary funds – effectively doubling funds under management to £600m. Tbe orthodox stockbroking business remained a separate partnership.

Then, a year later, Framlington was approached by Throgmorton Investment Management Services (TIMS), a privately-owned fund management group whose principal funds comprised five investment trusts worth about £400m. The upshot was an agreed £12.5m bid, providing the unit trust group with its second sizeable slug of funds.

As a result of the deal, Throgmorton Trust, the largest of the trusts, eventually ended up with 15 per cent of Framlington, and three Throgmorton directors joined the enlarged gronp's board.

Both Mr Stuttaford and TIMS are clear about the logic – and, indeed, have no quarrel on this score. Unit trust profits, dependent on both market levels and investors' continued allegiance, are highly volatile; closed-end investment trusts offer some measure of stability. Unit trusts, on the other hand, are a better growth market.

Unfortunately, this happy scenario has foundered on one significant stumbling block – a culture clash between the old Framlington set-up and TIMS' methods. Mr Stuttaford freely admits that the old style is informal, offering a good deal of autonomy and responsihility right down the line. TIMS politely describes the business as "under-managed", implying scope for wringing additional returns through a more formalised structure and tighter financial controls.

Way back in the summer, when these prohlems were already evident, Morgan Grenfell subsidiary Phoenix Securities was called in to advise. Then the crash intervened, only for matters to hot up again as CCF confirmed that it was "reviewing" its Framlington holding in January.

The bid by Throgmorton on Monday is clearly a pre-emptive move – making clear TIMS' preferred solution. Equally, Fremlington's rejection is scarcely a surprise: Mr Stuttaford would like Phoenix to battle in the hope that a mutually acceptable third party purchaser can be found. A number of expressions of interest, he says, have been received.

Unfortunately, such solutions – as Mr Stuttaford accepts, would need TIMS' support – and that may be hard to win. Throgmorton Trust, says Mr Loach bluntly, likes an ownership stake in its management company. "We don't want to be part of a big group – we value Framlington's independence."

Inevitably, given tbe overwhelming presence of practised financial hands, everyone has cards up their sleeves. If ownership of Framlington changes, three of Throgmorton trusts can change their managers – posing the possibility that £550m of Framlington's £1.55bn funds could walk out the door.

Framlington, equally, can claim that part of tbe group's value is a happy fund management team; hints of possible staff defections now hang in the air.

So what are the possible ontcomes? If an alternative price were high enough, Throgmorton might feel obliged to give way. But its own offer – worth 192p a share – suggests an exit multiple of perhaps 22 times analysts' forecasts of earnings in the year to June 1988. Some analysts are doubtful about how mucb further a rival suitor might wish to go in these markets, altbough the Framlington price, up 6p at 199p, has not ruled out the idea.

But the answer may really rest with CCF and its key block of shares. Yesterday, the French company was not commenting, although it is likely to make its position clear fairly soon. The one point on which all parties agree is that a public brawl helps no one – not tbe employees, not the shareholders, and certainly not Framlington's clients.

FRAMLINGTON LOOKS AT OTHER OPTIONS

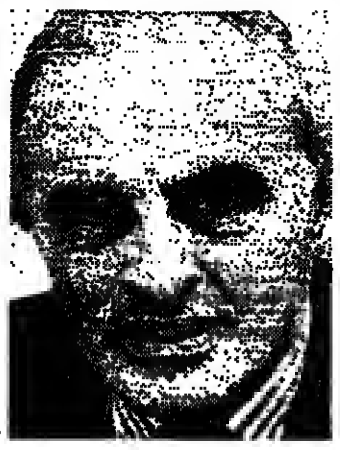
Directors of Framlington, the fund management group, yesterday said thet they had considered Monday's £66.3m offer from Throgmorton Trust, but decided not to recommend it.

"In view of the interest shown in Framlington by other parties, the board believes that the interests of shareholders, employees and clients would be best served by a completion of the evaluation of other options which has already started," said there statement.

The three Framlington directors who are also on the board of Throgmorton Trust took no part in the decision.

Yesterday, Mr Paul Loach, a director of Throgmorton, said the trust was pleased that there had not been an outright rejection and claimed that the offer remains "very good in terms of price".

Throgmorton announced that it has acquired a further 150,000 ordinary shares in Framlington. It now owns 2.689m ordinary shares or 9.1 per cent. It also own 4m convertible preference shares, giving it a fully diluted holding of 15.3 per cent.



Bill Stuttaford – no quarrel about the logic

SHARES FALL NEARLY 10% AS PROFITS DISAPPOINT

Timeshare turnround hits Barratt

BY PHILIP COGGAN

SHARES in Barratt Developments, the housebuilding group, fell nearly 10 per cent yesterday, dropping 19p to 216p, after the company announced interim pretax profits of £17.2m - below many market estimates.

The problem was a £3.6m turnround in the group's timeshare division. Adverse publicity about the marketing methods of some fringe timeshare operators severely affected demand and the division lost £1.6m in the first half. However, the company hopes that the division will break even over the year as a whole.

The rest of the group benefited from rising house prices in its various markets. The UK housebuilding division completed slightly fewer houses (3,100 against 3,300) in the first half but the average price per unit increased from £40,000 to £50,800. Barratt has now achieved its long term aim of reducing to 30 per cent the proportion of units it sells to first time buyers.

Sir Lawrie Barratt, chairman, said that house price rises were becoming more uniform across the country, although Scotland and parts of the North of England continued to be difficult. The company now has a UK land bank covering the next 2½ years output.

Sir Lawrie Barratt – UK land bank covers the next 2½ years output

The housing market was also strong in California where the group introduced a new range, Laguna Niguel, selling at prices of up to $450,000. Barratt's Californian land bank is equivalent to four years of output.

Sir Lawrie said that pre-tax profit margins across the group improved from 6.7 to 7.9 per cent and the company would continue to strive for a target of 10 per cent.

Pre-tax profits in the half year to December 31 were £17.2m (£12.5m) on turnover of £317m (£186.6m). After tax of £6m (£4m), earnings per share was 6.3p (4.8p). The interim dividend is being increased to 2.79p (2.45p).

● comment

Judged by the ease with which Barratt's share price fell yesterday, the company's reputation has still not recovered from the problems of 1983/4 when its relative decline against the FT-All Share Index was some 80 per cent. Some analysts were obviously hoping that the company's traditional second half bias would be reduced and were looking for £19m-£20m; but for the timeshare problems, they might have been proved right. The betting remains that Sir Lawrie can pip the previous full year record of £50.3m pre-tax; what happens after that depends on whether one believes that housebuilding is at the peak of the cycle. Supporters of Sir Lawrie take the line that if house prices outside the South East do start to catch up, then Barratt will be one of the main companies to benefit. Until then, the 7 per cent prospective yield will be the best support for the shares.

Bernard Matthews downturn

By Dominique Jackson

HIGH GRAIN prices and a drop in whole turkey and chicken sales pushed pre-tax profits at Bernard Matthews, turkey and meat products group, down from £15m to £14m for the 53 weeks ended January 3 1988.

The company warned in December that disappointing turkey orders, attributed to strong competition, would hit 1987 profits. Turnover slipped from £136.6m to £136m.

Other adverse factors cited were inclement weather in the first half and unexpectedly high grain prices in the second half.

Mr Bernard Matthews, chairman, said he was pleased to report that grain prices had fallen significantly since the year-end.

The directors are recommending a final dividend of 1.125p, making a total for the year of 1.75p per share. This is unchanged from 1986 after adjusting for a capitalisation issue. After tax of £5m, earnings per share were 7.1p (7.5p).

Turkey meat product sales in the UK showed marginal growth although red meat product sales were depressed in the face of price competition from commodity meats such as pork.

Mr Matthews said unbridled production increases from competitor companies had resulted in high stock carry-over in turkeys but he added that a competitive pricing policy was now stimulating strong demand for Easter.

He said the company was reviewing future policy in the petfood market following discouraging research results.

The company has recently adopted a far more aggressive marketing strategy which had proved so successful in boosting sales of added value turkey products, it would soon be extended to red meat products.

Distribution arrangements with H.J.Heinz in Canada are due to end shortly but negotiations with another Canadian distributor are at an advanced stage.

The US licensee, Sara Lee, has just installed a pilot plant to test market a range of Bernard Matthews products.

● comment

The breakdown of the frozen turkey cartel may not have excited much publicity but it certainly triggered a price war from which Bernard Matthews has emerged as one of the worst casualties. Yesterday's results appear to indicate that the Norfolk turkey breeder has not been successful in diversifying out of festive fowls. Investors have been waiting some time to see the magic Bernard worked with turkeys and their trimmings boost other products and projects. However, the Top Class pet food flop may well prompt the company to concentrate on its core business. The way ahead could lie in the US although the benefits of the Sara Lee deal will not be through until 1989. Mr Matthews plans an all-out advertising offensive which is bound to take its toll on profits. Current forecasts for a static £14m give a prospective multiple around 11. This appears high given that the outlook is far from "bootiful".

British Mohair ahead

British Mohair Holdings, yarn manufacturer, increased pre-tax profits by 23 per cent to £4.83m for the year to end-December 1987. Turnover rose by £2.1m to £44.1m.

Earnings per share improved by 27 per cent to 23.64p (18.62p). A final dividend of 6.1p makes a total of 7.5p for the year.

Mr Charles Fenton, chairman, said improved efficiency helped to produce the good results adding that reorganisation and an encouraging order book made the outlook promising.

UK COMPANY NEWS

Busy year for Meggitt as profits advance to £16m

BY DOMINIQUE JACKSON

Meggitt Holdings, specialist engineering group, posted pre-tax profits of £16.3m in the year to end December 1987.

This compares with £13.5m for the 14 months ended December 31 1986 and represents an increase of 41 per cent over the annualised 1986 figure of £11.6m.

Mr Ken Coates, managing director, said 1987 had been a busy year with the successful integration of Bestobell, which Meggitt acquired in 1986 following a contested bid battle, plus a series of strategic acquisitions.

Meggitt has sold off most of the overseas outposts of valve and seal maker Bestobell with only the Zimbabwe operations remaining to be sold.

As a result of these disposals, turnover for the year dropped to £167m from £203m in the previous reporting period.

Meggitt also announced the acquisition of the business and assets of the UK technical services division of Fisher Controls and, also from the Fisher group, a controls service centre in West Germany.

The total consideration is £606,000 cash for both operations which bad combined sales of £2.6m and operating profits of £178,000 in 1987.

Mr Coates said the company was actively looking for acquisitions, particularly in Europe and in the US and mainly for companies to join the main aerospace and industrial controls divisions.

The company currently has gross cash balances of £29m. Mr Coates said Meggitt had not dismissed the possibility of making a paper acquisition, but that this would depend on stock market conditions.

The aerospace and defence division is still the core business and contributed £73m to 1987 turnover. A long-awaited major US Defense Department order for Negretti Aviation was finally confirmed.

The board recommended a final dividend of 1.5p, making a total of 2.25p (1.25p).

Ken Coates — actively looking for acquisitions

● comment

Not too long ago, Meggitt acquired the "acquisition-hungry industrial conglomerate" tag but closer examination of the business shows this epithet to be less than appropriate. All the businesses it has so far picked up in its relatively short life fit rather neatly into Meggitt's complement of specialist engineering firms. The fight for Bestobell certainly paid off and Meggitt's management has been successfully knocking it into shape with its customary efficiency and discipline. It would be difficult to imagine the company setting its sights at any acquisition target in which its expertise would not be put to optimum use. The turn-of-the-year order book was strong although there has been a slight slowing lately. Current forecasts for £20m give a prospective multiple of around 10. This seems marginally undervalued, given the Meggitt track record and the company's plans to boost Bestobell margins even further.

Charles Barker shortfall at £2.55m

By David Waller

Charles Barker, the advertising and communications group founded in 1812, yesterday blamed a "fundamental reorganisation" for a 26 per cent decline in its 1987 pre-tax profits to £2.55m.

According to Mr David Norman, the "new-broom" chairman and chief-executive appointed on December 1 last year, "the nettle has been grasped". Six loss-making subsidiaries have been closed, management restructured and the advertising agency, Ayer Barker, relocated.

"Given reasonable trading conditions, 1988 should see a marked improvement in profitability," said Mr Norman yesterday. He warned however that this was unlikely to show through in the first half of the year: "It takes twelve months to turn the tanker round."

At the trading level, profits moved up from £3.3m to £4.25m, principally because of a strong performance from the "human-resources" division, which includes Norman Broadbent International, the company bought at the time of Barker's flotation in May 1986.

Human resources accounted for 58 per cent of operating profits; the contribution from advertising and public relations was not disclosed.

The six disbanded businesses, all in the "below the line" sector, collectively lost £563,000; taxable profits were depressed further by an exceptional item of £942,000 arising through the costs of reorganisation and redundancy.

Fully diluted earnings per share fell from 8.9p to 5.1p — but after a final payment of 2.1p per share, the full year dividend of 3.2p is 6.7 per cent ahead of the 3p paid in 1986.

● comment

Ever since Charles Barker joined the market nearly two years ago, there has been much talk about reorganisation, with the number of core businesses fluctuating from one results announcement to another. At last, the talk seems to have been translated into action under Mr David Norman, and future energies will be concentrated on PR, head-hunting and advertising after the divestment of the loss-making marketing service companies. As Mr Norman conceded yesterday, this reorientation of priorities and restructuring of the management is unlikely to make any positive impact on the profit and loss account until the second half of the year. So, after flat interims, analysts expect a recovery to £4.75m for the full year, putting the shares on a prospective multiple of 9½. For a "special situation" that is not high, but the shares are unlikely to outperform until the run up to the figures in a year's time.

Tibbett & Britten rises 40%

BY ANDREW HILL

PROFITS at Tibbett & Britten Group, which provides transport and distribution services for the clothing and retail industries, increased by 40 per cent to £4.73m before tax in the year to December 31, compared with £3.38m in 1986.

Turnover rose 42 per cent to £51.1m (£36m) and earnings per share were up from 9.1p to 11.6p.

Over 90 per cent of last year's revenue growth came from the group's new operating divisions: Dartford Securities (DSL), designer and manager of regional distribution centres for Marks and Spencer; Retail Consolidation Services, which develops new distribution operations; and Storcare, set up to service clothing importers and retailers.

Mr. John Harvey, Tibbett's chairman, said yesterday: "Last year we were adding both to the capacity of the company and to its abilities. We also made contracts, the benefits of which will be seen this year and in 1989."

Up to 65 per cent of Tibbett's total business still comes from clothing companies, including Marks and Spencer which provides 40 per cent of the group's business.

Mr Harvey intends to reduce the proportion of turnover from these areas, by increasing the contributions from the grocery, toiletries and household and consumer electricals sectors.

He said large stores were now increasing sales space by contracting out stock storage and distribution and about 75 per cent of Tibbett's business is now provided by three- to seven-year contracts from retailers and manufacturers. The group handles goods produced by Elida Gibbs, Dickins & Jones and IBM, among others.

From March 1, Tibbett has been managing two 100,000 sq.ft. warehouses for F.W. Woolworth. The group now operates 28 sites and 2.5m sq.ft. of warehousing.

The board recommended a final dividend of 3p, making 4.5p (2.8p) for the year.

Computer People ahead

Computer People Group, the supplier of temporary and permanent computer staff which came to the market last May, increased pre-tax profits by 43 per cent to £2.47m for the year to December 31.

The increase from £1.73m was on turnover of £36.7m, up 27 per cent from £28.8m. Earnings per share rose from 11.3p to 13.9p.

A final dividend of 2.4p is proposed, making a total of 3.6p for the year.

The directors predict that the increased investment in the number of consultants, which slowed profits growth in the second half, will result in higher sales in the current year.

Campari more than doubled

Campari International, the sporting leisurewear and camping equipment company, more than doubled pre-tax profits from £1.78m to £3.58m for the year to November 30 1987 on turnover up 15 per cent from £30.96m to £35.54m. A final dividend of 5p has been proposed, making 6.5p for the year against 3p in 1986.

The directors say that worldwide sourcing of products continues, and that the results of active design department work and an excellent performance by the sales team is reflected in a healthy forward order book.

Campari had been making steady losses since 1982 - largely because of high interest charges on very heavy debts - until Mr Ake Nordin, a Swedish entrepreneur, took a 48 per cent stake in 1986.

Earnings per share, on the increased capital following a rights issue in May, were up 82 per cent from 19.5p to 35.42p.

Yearling bonds

Yearling bonds totalling £1.25m at 9 3/16 per cent, redeemable onMarch 29 1989, have been issued by the following local authorities. Northavon District Council £0.25m; Swansea (City of) £1m.

Sunleigh jumps to £1.7m

PRE-TAX profits for Sunleigh Electronics, the USM-quoted electrical and electronic manufacturing group, jumped 68 per cent in 1987 to £1.72m. This was up from 1986's actual result of £620,000, since restated at £1.03m to include the corresponding figures for PJO Industrial and Powakaddy International acquired in June and July respectively.

Turnover moved up 39 per cent to £13.98m (£10.06m restated, £5.63m actual) and earnings per 10p share came out 45 per cent higher at 2.86p (1.97p restated, 1.68p actual). The directors recommended an increased final dividend of 0.375p (0.25p) to make a total of 0.5625p, up 50 per cent on 1986's 0.375p.

Mr Tony Merryweather, chairman, said the policy of improving profitability by better utilisation of resources in previously underperforming companies and encouraging the growth of young dynamic businesses in the group had produced a highly satisfactory result for the year.

BOARD MEETINGS

The following companies have notified dates of board meetings to the Stock Exchange. Such meetings are usually held for the purpose of considering dividends. Official indications are not available as to whether the dividends are interims or finals and the sub-divisions shown below are based mainly on last year's timetables.

TODAY

Interims- Jove Investment Trust, Lucas Industries, Minerals Oils and Resources Fund, Pegasus Group, TIP Europe.

Finals- Arnotts, Automated Securities, Barro Industries, Bemrose, Brake Brothers, Bridon, C.S.C. Investment Trust, Catalyst Communications, Central Independent TV, Colourgraphic, Cookson, Croda International, Dean and Bowes, Desoutter Brothers, European Home Loans, Filofax, Guinness, Laing Properties, London and Edinburgh Trust, Molins, George Oliver (Footwear), Rolls-Royce, Shorco, Smith and Nephew, Spirax- Sarco Engineering, TV-am, Tronoh Mines Malaysia, James Wilkes, Wilson Bowden, Wills Group.

FUTURE DATES

Interims-	
Blenheim Exhibitions	Mar 31
Chrysalis	Apr 15
Save and Prosper	Apr 5
Finals-	
Aspen Communications	Mar 25
Blue Circle Industries	Apr 15
Erith	Apr 6
Hawker Siddeley	Apr 20
Kleinwort Benson Gilt Fund	Apr 5
Nestor-BNA	Mar 29
Peek	Mar 25
Portals	Mar 30
Renwick	Mar 30
Spear (J.W.)	Mar 30
Standard Chartered	Mar 30
UTC	Mar 29
Wiltshire Systems	Apr 12

Public Works Loan Board rates

Effective March 23

Years	Quota loans repaid by EIP†	Quota loans repaid Ann††	Quota loans repaid at maturity§	Non-quota loans A* repaid by EIP†	Non-quota loans A* repaid Ann††	Non-quota loans A* repaid at maturity§
1			8¾			9¾
Over 1 up to 2	8¾	8¾	8⅞	9¼	9¼	9⅜
Over 2 up to 3	8⅞	8⅞	9	9⅜	9⅜	9½
Over 3 up to 4	9	9	9⅛	10	10	9⅝
Over 4 up to 5	9	9	9¼	10	10	9¾
Over 5 up to 6	9	9⅛	9¼	9½	9⅝	9¾
Over 6 up to 7	9⅛	9⅛	9⅜	9⅝	9⅝	9⅞
Over 7 up to 8	9⅛	9¼	9⅜	9⅝	9¾	9⅞
Over 8 up to 9	9¼	9¼	9½	9¾	9¾	10
Over 9 up to 10	9¼	9¼	9½	9¾	9¾	10
Over 10 up to 15	9⅜	9½	9⅜	9⅞	10	9⅞
Over 15 up to 25	9⅜	9⅜	9⅜	9⅞	9⅞	9⅞
Over 25	9⅜	9⅜	9⅜	9⅞	9⅞	9⅞

*Non-quota loans B are 1 per cent higher in each case than non-quota loans A. †Equal instalments of principal. †† Repayment by half-yearly annuity (fixed equal half-yearly payments to include principal and interest). § With half-yearly payments of interest only.

UK COMPANY NEWS

Britannia Arrow advances 42%

BY CLAY HARRIS

Britannia Arrow Holdings, the fund management and financial services group, increased pre-tax profits by 41.6 per cent to £41.8m in 1987, although growth slowed in the second half because of the market crash.

The result was below most market forecasts, largely reflecting a 50 per cent fall in profits from insurance activities and unexpected exceptional items.

Britannia left its final dividend unchanged at 3.2p, to make a total 10 per cent higher at 5.5p (5p). Lord Rippon, chairman, said: "In the light of recent events, we have thought it prudent to take a conservative view."

By year-end, Britannia had £15.75bn in funds under management, only £100,000 less than 12 months previously, but nearly £3bn below the June 30 figure reported at the interim stage. Britannia's use of year-end exchange rates magnified the effect of the dollar's decline – which cut the value of managed funds by an estimated £3bn.

Lord Rippon said the October fall in share prices had not materially affected Britannia, whose cash reserves left it well placed to take advantage of opportunities.

"I think the next area for expansion is Europe ahead of 1992," Lord Rippon said. Britannia might consider collaborative joint ventures, he said, but "we have the cash resources to undertake an acquisition if that appears to be the best route."

The pre-tax increase from £29.5m was achieved on turnover, excluding banking and insurance, of £1.26bn (£854m).

At the pre-tax level the contribution from insurance fell from £972,000 to £455,000, reflecting a direct charge for the unrealised post-crash losses on NEL's share portfolio. In two newer insurance ventures, Brittania took a £603,000 exceptional charge for product development costs.

Britannia also made a £1.02m exceptional provision against a £2.5m pre-crash loan to a share option trust.

Lord Rippon: Europe is next area for expansion

Interest payable fell to £2.8m (£3.8m), but overheads rose to £1.74m (£1.71m). Tax took £11.56m (£8.22m) and minorities £537,000 (£1.02m). An extraordinary credit of £32.1m (£4.65m) comprised the £34.6m profit on the sale of Britannia's stake in Singer & Friedlander and of its former City offices less investment losses of £2.14m and other miscellaneous losses.

Earnings per share rose by 14 per cent to 13p (11.4p), or to 11.9p (10.4p) fully diluted.

● **comment**

Britannia's fortunes are highly geared to the market. In the absence of an early, sustainable bull run, that is not good news. In some areas (flat unit trust sales, enforced changes in pricing) its plight is shared by competitors. Its US exposure – back to more than 50 per cent of investment turnover – is a handicap now, but that perception could quickly change. The group's first full year of MIM and Invesco threw up the benefits of transatlantic co-operation more quickly than expected. Nevertheless, a cautious view limits a pre-tax forecast to £30m, for a prospective fully diluted p/e of 13. The dividend yield of 7 per cent will underpin the price, but shareholders have probably seen the last increase in pay-out for a year or so.

Rationalisation helps NEI reach £32.2m

BY NICK GARNETT

Northern Engineering Industries, which is just emerging from a two-year rationalisation and cost-cutting programme reported yesterday a 38 per cent increase in pre-tax profits last year to £32.2m (£23.2m).

Turnover for the Newcastle-based heavy engineering group was sharply down from £937.5m to £804.6m.

The profit and sales figures were largely in line with expectations. However, NEI's share price, which had risen over the past month slid back yesterday from 109p to close at 102p.

Mr Terry Harrison, chairman and chief executive, said the rationalisation programme in which 14 businesses had been closed or sold and worldwide employment reduced by 6,200 to 23,600 was now completed.

The programme had given the company virtually all the benefits it had expected from it, Mr Harrison said.

NEI recently purchased the Victor Products mining equipment business, signalling a more acquisitive outlook after years of retrenchment.

Mr Harrison said there would be more acquisitions, indicating that they were likely to be in the field of ancillary equipment and in materials handling.

NEI's turnover will fall again substantially this year. The group thinks it might drop to about £700m before climbing again in 1989. It also indicated that this year's pre-tax profits will rise to between £36.5m and £38m.

Order intake last year improved to £723m from £648m in 1986 and the group indicates that it should rise to more than £750m this year. Earnings per share were 6.23p last year as against 4.23p in 1986. A final dividend of 3.6p per share is being recommended following an interim dividend of 1.65p.

● **comment**

No one doubts that the rationalisation and management restructuring has been good and handled very well and a big investment programme has revolutionised some of the group's plants. There have been some significant successes, including contracts for big ship lifts, a breakthrough into Army bridging systems, power distribution contracts in Saudia Arabia and a recent turbine contract in Hong Kong. Ancillary work on power stations, like desulphurisation may be on the horizon. But the worries persist that NEI does need some new medium-term growth businesses. The profit increase does not look as good when the £5m pension holiday is taken into account. There is a problem of where improved margins will come from other than in materials handling, and new power station contracts in the UK will not really hit NEI's books until 1990. The contribution of activities in Africa which accounted for more than a third of profits still looks to be too large. In power generation NEI is in for the long term but in the 1990's this sector will be even more ferociously competitive.

Overseas sales help boost Frank Usher

By Alice Rawsthorn

Frank Usher, the USM-quoted evening wear manufacturer, yesterday announced a 9 per cent increase in annual pre-tax profits to £1.7m. Turnover rose by 31 per cent to £13.4m.

Mrs Anne Bruh, managing director, said that the company had enjoyed a good year for trading and had made progress both in the home market and overseas.

The business was, however, disrupted by its move from the West End of London to a new headquarters in West Hendon, north-west London. The move created unexpected problems for staffing and facilities. The extra cost incurred is expressed in the results as an exceptional item of £85,000. Earnings per share for the year fell to 14.4p (14.7p).

In the year to January 31, the company made operating profits of £1.8m (£1.6m). It paid £92,000 (£114,000) in interest and £556,000 (£517,000) in taxation. The board proposes to pay a second interim dividend of 2p and plans to recommend a final dividend of at least 4p for the 16 months to May 31. This makes a total of 8p, compared with 5.5p for the year to January 31 1987.

Frank Usher now gleans just under half of its turnover overseas. West Germany is established as its biggest market. Mrs Bruh said that she did not expect the company to be affected by the recent rise of sterling because it had bought currencies forward to reduce its exposure.

The company is now negotiating to begin licensing agreements with established manufacturers in markets like the US and Japan, which it does not have enough capacity to supply.

Trade Indemnity in advertising drive

BY NICK BUNKER

BRITAIN'S biggest credit insurer, Trade Indemnity, is to spend £1m on an advertising campaign starting next month aimed at the estimated 80,000 medium to large companies which lack insurance against bad debts.

It announced the move yesterday as it reported 1987 pre-tax profits up 12.2 per cent at £10.51m. Mr John Phillips, chief general manager, said Trade Indemnity's premium income had risen from £72.1m in 1986 to £77.6m last year and was targeted to reach £90m in 1988.

Export credit insurance premium income at Trade Indemnity has grown from £1.55m in 1984 to £3.64m in 1986 and £5.228m last year, and the company believes an annual growth rate of 30 per cent is feasible.

Earnings per share rose 22.4 per cent to 32.47p last year, and the group is raising the total dividend 30 per cent to 5.6p.

● **comment**

Trade Indemnity is a reproof to much of the rest of the insurance industry. It is such a model of how a non-life insurer should be run that even during the epidemic of British business failures in the early to mid-1980s it produced underwriting profits. Its secret is skilled exploitation of a business franchise - credit insurance - where it has few substantial competitors. Among the weapons in its armoury are a cherished database of information on 1m UK companies, discreet and carefully-tended connections with finance directors across the whole range of British industry, and individual assessment of all its risks. A feature shared with some of the most successful property/casualty insurers in the US is that it has worked to motivate staff by encouraging employee share ownership: 30 per cent of its 400 people own some of its equity. Its only defect has been a failure to advertise effectively, but that is being addressed. And with 1987 showing a 25 per cent fall in insolvencies in the UK, Trade Indemnity believes the rate of business failures has plateaued. Unfortunately for the investing public, the group is 79 per cent owned by seven big insurers. They are not selling.

UK ECONOMIC INDICATORS

ECONOMIC ACTIVITY-Indices of industrial production, manufacturing output (1980=100); engineering orders (1980=100); retail sales volume (1980=100); retail sales value (1980=100); registered unemployment (excluding school leavers) and unfilled vacancies (000s). All seasonally adjusted.

	Indl. prod.	Mfg. output	Eng. order	Retail vol.	Retail value*	Unem-ployed	Vacs.
1986							
2nd qtr.	108.5	103.3	96	121.3	154.0	3,203	175.6
3rd qtr.	110.3	104.3	95	123.7	158.7	3,202	200.2
4th qtr.	110.5	106.9	96	126.5	194.3	3,141	213.0
1987							
1st qtr.	111.3	106.5	95	125.4	156.9	3,073	210.4
2nd qtr	112.2	109.6	96	128.3	165.9	2,985	226.1
3rd qtr	114.0	111.3	91	131.8	171.8	2,827	241.3
4th qtr	115.1	112.8	94	133.4	210.8	2,658	262.1
July	113.2	110.3	94	131.0	173.6	2,878	235.2
Aug.	114.9	112.2	98	132.1	171.0	2,829	236.9
Sept.	113.9	111.4	91	132.0	170.0	2,773	246.6
Oct.	114.9	112.2	92	133.0	180.8	2,712	261.4
Nov.	115.1	112.9	94	133.6	198.3	2,649	263.3
Dec.	115.5	113.3	94	133.5	244.3	2,614	256.6
1988							
Jan.	114.8	113.5		134.9	176.0	2,565	249.5
Feb.				135.0		2,531	247.9

OUTPUT-By market sector; consumer goods, investment goods, intermediate goods (materials and fuels); engineering output, metal manufacture, textiles, leather and clothing (1980=100); housing starts (000s, monthly average).

	Cnsmer. goods	Invest. goods	Intmd. goods	Eng. output	Metal mnfg.	Textile etc.	Housg. starts*
1986							
2nd qtr.	105.3	99.4	116.2	101.3	110.0	104.2	19.5
3rd qtr.	106.4	99.1	117.3	101.6	108.8	103.1	19.4
4th qtr.	106.4	101.6	115.7	104.2	114.4	104.6	15.5
1987							
1st qtr.	107.6	100.8	117.9	103.2	114.5	103.2	17.4
2nd qtr	110.3	101.8	118.0	104.7	119.3	105.0	19.6
3rd qtr	112.6	105.1	118.7	108.1	120.3	106.4	20.3
4th qtr	113.9	107.7	119.1	109.8	121.6	107.3	17.3
June	110.3	102.4	118.1	105.0	123.0	105.0	20.2
July	112.2	103.5	118.7	106.0	121.0	107.0	20.9
Aug.	113.3	106.8	119.5	110.0	122.0	108.0	17.9
Sept.	112.4	104.0	117.3	109.0	119.0	106.0	22.1
Oct	112.5	105.3	119.4	109.9	121.0	107.0	18.1
Nov.	113.5	107.5	119.2	109.0	129.0	107.0	18.8
Dec.	114.6	109.6	118.6	111.0	115.0	107.0	14.9
1988							
Jan.	114.4	106.5	119.3	109.0	127.0	107.0	17.1

EXTERNAL TRADE-Indices of export and import volume (1980=100); visible balance; current balance (£m); oil balance (£m); terms of trade (1980=100); official reserves.

	Export volume	Import volume	Visible balance	Current balance	Oil balance	Terms trade	Reserve US$bn
1986							
2nd qtr.	121.9	130.1	-1,506	+146	+765	102.5	19.20
3rd qtr.	122.6	130.0	-2,291	-856	+621	103.2	22.43
4th qtr.	129.9	142.3	-2,554	-815	+823	100.9	21.92
1987							
1st qtr.	129.5	133.5	-1,211	+496	+1,159	100.4	27.04
2nd qtr	126.6	141.1	-2,317	-594	+1,016	103.4	34.36
3rd qtr	130.6	151.1	-3,109	-1,207	+936	103.7	34.81
4th qtr	134.8	152.5	-2,996	-1,186	+1,072	103.9	44.33
July	130.1	148.9	-971	-357	+297	103.3	34.91
Aug.	127.6	154.3	-1,424	-799	+359	103.5	34.36
Sept.	134.1	149.7	-685	-51	+310	103.9	34.81
Oct.	131.6	148.4	-922	-322	+394	103.7	41.40
Nov.	135.4	154.3	-1,056	-456	+332	103.7	41.28
Dec.	137.1	154.9	-1,010	-410	+346	104.2	44.33
1988							
Jan.	136.0	151.5	-1,505	-995	+359	104.3	43.09
Feb.							42.33

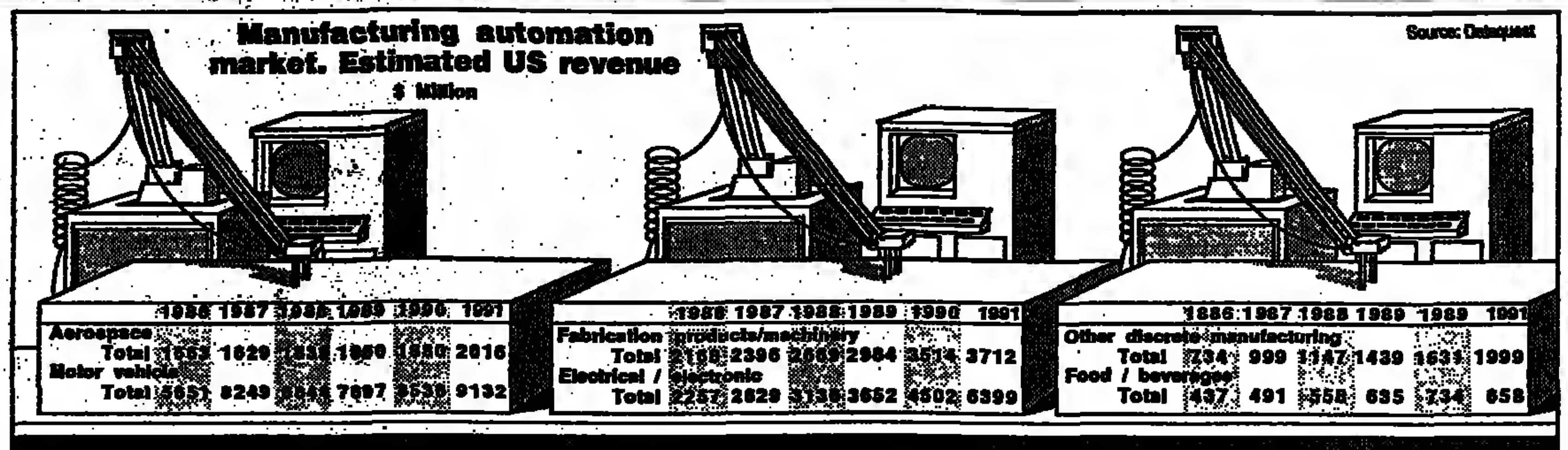
FINANCIAL-Money supply M0, M1 and M3 (three months' growth at annual rate); bank sterling lending to private sector; building societies' net inflow; consumer credit†; all seasonally adjusted. Clearing Bank base rate (end period).

	M0 %	M1 %	M3 %	Bank lending £m	BS inflow £m	Cnsmer. credit† £m	Base rate %
1986							
3rd qtr.	5.9	20.3	15.4	+6,895	168	+770	10.00
4th qtr.	7.6	15.3	14.1	+10,516	2,814	+501	11.00
1987							
1st qtr.	1.2	20.6	20.3	+6,723	1,465	+977	10.00
2nd qtr	3.3	22.7	20.3	+2,554	1,694	+1,068	9.00
3rd qtr	8.1	25.2	21.7	+11,596	1,211	+874	10.00
4th qtr	7.3	23.3	22.7	+11,221	3,007	+946	8.50
June	4.5	30.6	21.9	+3,969	556	+337	9.00
July	7.7	34.5	24.3	+4,581	347	+277	9.00
Aug.	7.1	22.5	21.0	+2,651	687	+350	10.00
Sept.	9.5	19.5	21.4	+4,324	197	+347	10.00
Oct.	6.9	36.7	23.0	+2,977	512	+340	9.50
Nov.	7.1	23.2	21.3	+3,361	1,126	+357	9.00
Dec.	7.6	11.6	21.7	+4,942	1,069	+249	8.50
1988							
Jan.	2.7	1.0	8.3	+5,404	890	+320	8.50
Feb.					1,102		9.00

INFLATION-Indices of earnings (Jan 1980=100); basic materials and fuels; wholesale prices of manufactured products (1980=100); retail prices and food prices (Jan 1987=100); Reuters commodity index (Sept 1931 =100); trade weighted value of sterling (1975=100).

	Earn-ings*	Basic matls.*	Whsale. mnfg*	RPI*	Foods	Reuters* cmdty.	Sterling
1986							
2nd qtr.	184.0	125.8	145.7	97.9	96.7	1,714	76.1
3rd qtr.	187.4	120.8	146.3	97.9	96.8	1,464	71.9
4th qtr.	191.0	127.4	147.4	99.1	98.3	1,606	68.2
1987							
1st qtr.	192.0	129.8	149.3	100.3	100.5	1,590	69.9
2nd qtr	196.0	128.7	150.9	101.9	101.6	1,596	72.5
3rd qtr	202.0	131.0	151.6	102.1	100.5	1,647	72.7
4th qtr	206.9	133.4	152.9	103.2	101.7	1,663	74.9
July	203.1	130.5	151.3	101.8	100.4	1,632	72.8
Aug.	201.6	131.3	151.5	102.1	100.7	1,655	72.8
Sept.	201.4	131.1	152.0	102.4	100.4	1,655	73.1
Oct.	203.4	130.6	152.6	102.9	101.1	1,662	73.9
Nov.	207.2	131.4	153.2	103.4	101.6	1,692	75.4
Dec.	210.3	135.1	153.7	103.3	102.4	1,707	75.8
1988							
Jan.	206.8	135.9	154.6	103.3	103.9	1,702	74.9
Feb.		134.7	155.3			1,755	74.3

*Not seasonally adjusted
†Net changes in amounts outstanding, excluding bank loans.



Manufacturing Automation Equipment

Volatile alliances born of market growth

By Nick Garnett

IF THERE was one segment of manufacturing which trumpeted promises from the roof-tops but never delivered worthwhile results, it was the supply of factory automation equipment.

As the "factory of the future" became a fashionable catch-phrase at the end of the 1970s, customers and hardware suppliers rushed into the industry, displaying all the glee of a child with a new toy. What they reaped was pain and disillusion.

General Motors in the US made a costly fool of itself by automating factories without knowing what it was doing, while the first batch of suppliers, like Westinghouse and General Electric, issued wildly optimistic statements about huge amounts of money to be made from the snpply of advanced automation equipment. They were forced to backtrack embarrassingly.

Westinghouse virtually disappeared from the scene and many other suppliers, from robot makers to producers of flexible machining cells, made heavy losses trying to elbow into the market.

A long shadow was cast right across the industry by a mixture of over-ambition on the part of equipment makers and buyers, unreliabla hardware, plain bad management and nightmares in computer software (the kind of thing that gave widgets square holes instead of round ones).

Now, however, the suppliers find themselves in a cautiously expanding market for equipment and services which help automate parts of factories and warehouses, and transmit information from the shopfloor to all the other departments of a company that have some link with production.

Total annual sales of manufacturing automation equipment are estimated to be more than $35bn and growing.

This figure inclndes a vast array of equipment ranging from computers used on the shopfloor, in purchasing departments, production control and engineering, to machining lines in car plants and aerospace factories.

It incorporates sales by software companies, suppliers of automated handling systems and computer aided design, engineering and test equipment. A battery of service companies which provide advice on how different features of automation in a factory can be linked also flit around the customers.

Though the business of supplying equipment is very young and immature it is very crowded. With parts of it fragmented, it encapsulates bitter struggles for control among vendors within each product area.

As no type of company can offer anywhere near the full range of products, the industry has also been marked by a host of volatile alliances between vendors as well as a series of takeovers, mergers and joint ventures.

Such arrangemants are increasingly common in many industries. In factory automation, though, many of them involve companies with extraordinarily different roots and products, forced together by demands of the customer.

Some of the more permanent shifts in ownership are aimed at securing stronger positions in individual product segments. Others have been designed to encroach into new product sectors unfamiliar to the predator company.

Wild optimism among suppliers only led to embarrassment and backtracking

Though the supply industry is still so shapeless as hardly to justify being called an "industry", these cross-product deals are putting a few suppliers in increasingly dominant positions.

It is easy to exaggerate how far factory antomation has come. General Motors installed its first robot in 1961 yet the majority of factories in the West have only limited automation facilities. The first definition of computer integrated manufacturing – the uninterrupted flow of electronic information through all departments of an enterprise – was coined in 1973 but there are still few, if any, full CIM systems in the world.

"The average shopfloor has not come of age with computers," says Tom Kaminsky of consultants Arthur Andersen. Some manufacturing countries, like the UK, have a dearth of factories with even a modicum of genuine automation hardware.

Even West Germany, the leading European consumer of automation equipment, had only 35 full-scale flexible manufacturing systems (FMSs) at the beginning of 1986, according to a recent report by Frost and Sullivan, the data company.

At the same time, suppliers in a number of sectors struggle to make money and others continne to flee the industry. Even a powerful machine tool maker like Scharmann of West Germany, a leading supplier of FMS in Europe, still makes far bigger profits selling stand-alone machines than equipment for linked systems.

The number of manufacturers of automated guided vehicles (AGVs) rocketed during the 1980s from about ten to some 60 or so. But many of them, unable to make money, have been absorbed by more powerful competitors.

The market price of computer aided design and manufacturing equipment (CADCAM) has fallen sharply, pushing a number of the smaller makers out of the business.

Meanwhile in Japan, many automation equipment suppliers like Matsushita and Toshiba are recording no increase in sales, and demand for Japanese-made robots appears to have fallen.

A very large proportion of potential customers also remains bemused by it all, particularly over whether so-called islands of automation on their shopfloors should be linked into more comprehensive systems.

Nevertheless, there are plenty of statistics to show that overall the industry is growing. The worldwide market for robots was estimated to be worth almost $2bn in 1986 with the number of installed robots numbering 40,000 and rising.

Frost and Sullivan believes the European market for FMS is increasing at more than 30 per cent a year, a trend which, if continued, would lift this market from some $620m now to $1.9bn in four years.

While many companies remain wary of big comprehensive automation plans, others are pressing ahead with such projects. Ford, for example, is engaged in a large programme to introduce a form of CIM in stamping operations at its US plants.

Computers are edging into prodnction areas at increasing speed. The US market for all types of factory automation equipment is the biggest in the world and of this market 25 per cent by sales revenue is now made up of computer hardware directly or indirectly linked to manufacturing processes, according to Dataquest, the information analyst.

This is still much smaller than the manufacturing systems themselves, which, including machine tools, account for 60 per cent of the US automation market.

Some of the battles among suppliers are being fought within traditional compartments by long time foes. For example, IBM, the world's biggest computer company, has been introducing smaller supermini machines to help it challenge tha position held by Digital Equipment Corporation (DEC) at the point of manufacture on the shopfloor.

DEC in turn announced this month the addition of a bigger compnter to its range in an attack on IBM's position as a supplier of plant and department-wide systems.

An array of other computer makers, like Hewlett-Packard, Honeywell and Unisys are also in this market, but some doubt whether all of them can maintain their existing positions.

At the same time relative newcomers are making an impact by offering special features. Tandem produces equipment which duplicates almost every component in a so-called fault-tolerant system. In just a few years the company has gone from nothing to a $100m a year business in computers for automation.

In the supply of special purpose machines for vehicle building, traditional antagonists like Cross, Lamb and Ingersoll in the US and Hueller Hille, Burkhardt and Weber and Heller of West Germany, also seem to be coping with the shift away from rigid transfer machines to more flexible transfer lines.

But this area could become even more crowded if Japanese machine suppliers use the increasing worldwide spread of Japanese car plants to piggyback into the Western market for this equipment.

"I do not think that will happen because of the strength of the yen," says Eden Diver, a senior executive at Cross. However, Komatsu is supplying the UK's Rover Group with a huge press that is being assembled by contract engineers in Britain.

Against this background, one of the most significant developments in the scramble to stay in the automation business has been the forging of new relationships between suppliers.

Some of these are temporary arrangements. When a large automation project is undertaken, a team made up of specialists from different supply companies is usually set up to oversee the project.

The industry encapsulates bitter struggles among vendors in each product area

"Collaboration with other types of company is very common and these partnerships are usually temporary," says Stephen Darvill, marketing and sales manager for industrial systems at Logica, the UK software company.

However, a number of takeovers and permanent joint ventures among vendors are now under way as part of a general theme in which increasing power is being placed in the hands of fewer companies.

Some of these alliances have been forged to increase the leverage of the participating companies within a particular segment.

For instance, General Electric and Fanuc of Japan pooled a large part of their electronic controls business 18 months ago in their fierce battle with other control suppliers, including the powerful Siemens of West Germany, Europe's largest factory automation company.

EDS, the dominant US software house has been expending rapidly by acquisition, partly to extend its influence in manufacturing automation. This is part of a process which many believe will result in fewer large software houses and a greater array of companies offering specialist software packages. It is the middle-sized companies that will find themselves increasingly squeezed.

There are far more instances of joint ventures and takeovers designed to increase the spread of capability. Soma of these are self-contained deals. Examples include the joint venture between Hewlett-Packard and Bechtel, the process and contracting engineering company, and the recently announced takeover of Computervision, one of the top three US suppliers of CADCAM equipment, by Prime, the computer company.

US control suppliers like Allen Bradley also have such arrangements. In France, an industrial automation company is at the moment the subject of hostile bids from Schneider and from Framatome, both of which have very different engineering products.

A growing trend, though, is that many of these deals are part of linked chains in which some suppliers are becoming increasingly powerful across a wide sphere of activities. IBM is at the centre of a web of such arrangements, badge-engineering robots made by a Japanese manufacturer and setting up a joint venture with Dassault, the French aerospace company. In this arrangement, IBM sells under its own name Dassault-designed CADCAM systems.

In another striking development, a joint venture between IBM and Measurex, the US process control systems maker has helped IBM secure a big automated manufacturing contract from Ford.

One qnestion still to be resolved is whether a certain type of company will emerge in a dominant position as systems integrator for big projects. Computer manufacturers, using their own in-house production experience, are interested in this. So are the big machine tool makers, software suppliers and advice companies like Coopers and Lybrand and Ingersoll Engineers.

There will be a great deal of competition for this integration role but the market might by then be big and varied enough for a lot of people to get a slice of the cake.

IBM office systems get the telex message

By Geoffrey Charlish

IMI COMPUTING of Witton, Birmingham, in the UK, has developed a telex handler called Atlas for users of IBM 360 mainframe computers. It provides a "totally packaged solution to the problem of integrating telex into the IBM office environment," claims the company.

Atlas allows IBM terminal users to exchange telexes from desk to desk within a company, or externally over the world's telex network.

IMI Computing says Atlas is a low-cost alternative to large message switching systems within big companies.

Atlas's functions include telex copy circulation, telex mail shots, and out-of-hours (store and forward) transmission. Individuals can set np their own telex address books.

Whitaker compacts optical booklist

By Geoffrey Charlish

J.WHITAKER and Sons of the UK has launched Bookbank CD-ROM Service, the first monthly booklisting in Europe to use optical recording technology.

The company's Bookbank gives details of nearly 0.5m titles, from 13,000 publishers. Already available on microfiche (postcard-sized pieces of microfilm), it is widely used by bookshops and libraries. Now all the data is available on a single 120mm (4.75in) CD-ROM (compact disc read-only memory).

Apart from quicker access using the screen and keyboard of an associated personal computer (IBM PC), the availability of the data in electronic form means that the software can be used to generate particular lists of books for the user (precise areas of interest for example).

The CD-ROM/PC combination can also exchange data with electronic systems with which the user's customers order books. Considerable cost saving and improved delivery times can be obtained, says Whitaker.

COMMODITIES AND AGRICULTURE

Canada heads for wheat sales record

By David Owen in Toronto

CANADIAN WHEAT exports are running well ahead of year ago levels, prompting analysts to project that sales for the 1987-88 crop year (ending July 31) may set a new record.

Up to March 13, exports totalled 11.7m tonnes, according to the Canadian Wheat Board, up nearly 20 per cent from 9.8m tonnes a year earlier. Increased sales to China account for a large part of the improvement.

By contrast, barley sales over the same period were well below year ago levels at 2.8m tonnes, against 4.7m in 1986-87. board officials attribute the decline to unusually heavy early season sales in 1986-87.

While the board has released no projections of eventual year-end export figures, a former commissioner turned grain analyst, Mr Jim Leibfried, is calling for wheat exports of 23.7m tonnes in the current crop year. This would be a sharp increase from 20.8m tonnes in 1986-87 and would comfortably exceed the current record of 21.8m tonnes exported in 1983-84.

Mr Leibfried is forecasting barley exports of 5.5m tonnes in 1987-88, down from 6.7m in 1986-87.

EC Commission proposes freeze for farm prices

BY DAVID BUCHAN IN BRUSSELS

THE EC Commission *yesterday* proposed a general freeze for the vast majority of European farm prices in the coming agricultural marketing year, with the exception of measures which may cut cereal prices by 2 per cent this year and of a proposed 6-8 per cent price rednction for poorer grade tobacco.

Mr Frans Andriessen, the EC Agriculture Commissioner, described the price proposals – to be given a first work-over by EC Agriculture Ministers next week – *as what could be "realistically expected"* in light of last month's summit agreements reforming the EC budget and *curbing farm spending.*

Freezing nominal prices would mean a drop in real prices, depending on the rate of inflation in various EC member states, the commissioner warned. That would be on top of the 3.5 per cent average cut in European *farm incomes last year.*

But Mr Andriessen cautioned that national ministers had "no room for manoeuvre" to make prices increases this year, without breaching the budgetary guidelines and farm product stabilisers which their heads of government had already agreed to. The Brussels summit set a ceiling of ECUs 27.5bn (£18.4bn) for this year's farm bndget, a ceiling which is only to rise each year at 74 per cent of the annual increase in Community gross national product.

"Any increases will have to be *offset elsewhere* to stay *within* the guideline laid down by the summit," Mr Andriessen said.

The Commission was not expected to propose either a price increase that would have defied the logic of the summit agreements or a general decrease that would have further penalised farmers, who already face substantial price penalties if they breach stabiliser production thresholds.

Some member states may try to side-step the impact of the Commission-proposed price freeze by pushing for devaluations in their so-called green currency rates. That would have the effect of raising ECU-set farm price in national currency terms. But the only agri-monetary change the commission is proposing is a 10 percentage point reduction in Greece's negative monetary compensatory amount, the highest in the Community. MCAs act as border taxes or subsidies to counter the effects of divergences between real and green currency rates on intra-community trade.

The only commission proposal with direct international ramifications is the suggestion of a premium to encourage the use of cereals in animal feed. Mr Andriessen said that the input of cereals into animal feed had decreased by some 6 m tonnes in the past five or six years, as cheap imports of tapioca from Thailand and corn-glnten had come to replace high-priced EC *wheat or barley in animal feed.*

Other key commission proposals include:

- A halving of the monthly increments paid during the year to encourage farmers to delay selling cereals into intervention. Mr Andriessen estimated that chiefly because of this proposed measure cereal prices might fall by 1.5 to something over 2 per cent this year, depending on the level of interest rates and storage costs. By this means Mr Andriessen is trying to redress his failure to get the Brussels Summit last month to agree to an immediate, first year price cut on cereals.
- A 5.2 per cent reduction in the intervention price for durum wheat, used particularly in the making of pasta. The aim would be to bring this product into a closer price relationship with cheaper soft wheat, and the impact on growers of the reduction would be partly offset by a 12.5 per cent increase in Commu*nity aid to the sector.*
- A 1 to 2 per cent premium for the two top grades of tobacco and a 6 to 8 per cent price reduction for the two lowest grades. This would make better economic and health sense for the Community, Mr Andriessen said.
- The method of calculating the intervention price for beef would be changed, so that it would be aligned with the average market price in the Community, and not always 2.5 per cent higher as under the present system. This follows the 15 per cent cut in the beef intervention price last year.

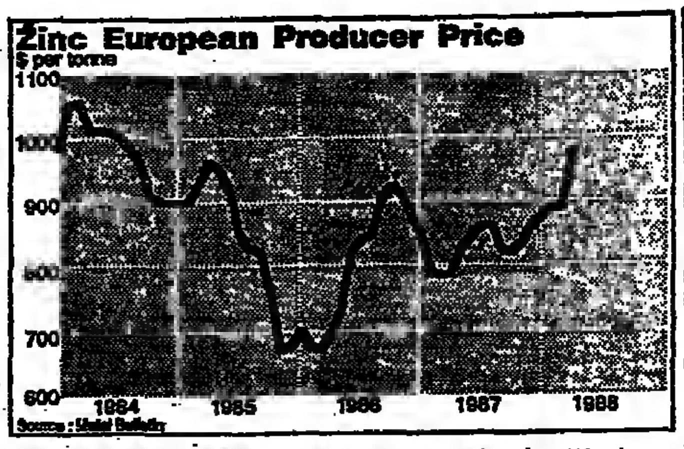
Producers raise European zinc prices

By Kenneth Gooding, mining correspondent

ZINC PRODUCERS raised their European prices yesterday for the third time this year. Most prices went up by $50 a tonne to $970 but two major groups, Electrolytic Zinc Australasia and Noranda of Canada, moved theirs up to $960.

European producer prices are now at their highest levels since July, 1984, when they reached $990 a tonne after China disturbed the market by buying extraordinarily large quantities of zinc from the west.

Although there have been two previous price increases this year – *$30 steps in mid-January* and at the begining of March – the latest moves were widely expected because an unusually large difference had developed between the London Metal Exchange price and that charged by the producers.



Last night the LME price for zinc to be delivered in three months closed £4.50 up at £554.50 a tonne (equivalent to $1,018).

The price is likely to remain high in the second quarter of this year and reach about $1,050 a *tonne in May, when demand for* zinc peaks, predicted Mr Robin Bhar, an analyst with London-based metal traders Rudolf Wolff.

It could then be expected to drift back to $1,000 in the summer, he said.

Mr Neil Buxton of Shearson Lehman Brothers London Metals Research Unit suggested: "Wa still believe that six months from now a zinc price of $1,000 a tonne is unsustainable".

He said that demand for zinc was "not soaring" but was expected to be up just above 2 per cent in 1988 compared with just under 2 per cent in the recent years.

The unexpected increase in demand for zinc was coming from the galvanised steel industry which, in turn, was experiencing a surge in offtake from one sector in particular: the automotive industry, Mr Buxton pointed out.

Until recently only a few up-market car producers such as Audi and Porsche in West Germany were using galvanised steel extensively but now somo volume car makers had also began to employ the material.

For example, Fiat's recently-launched new Uno uses considerabla quantities and Renault has switched to using galvanised steel in many of its car bodies.

Zinc consumption has been ahead of production for the past six years and by the end of last year producers' stocks had fallen from 432,000 tonnes in December 1986 to 357,000 tonnes.

Consequently hiccups in supply – *because of industrial disputes and technical problems* – this year are having a bigger impact on prices in the marginal (LME) market.

NICKEL PRICES SURGE STILL HIGHER

NICKEL PRICES continued their relentless progress to fresh peaks on the London Metal Exchange yesterday – although the premium for cash *metal over three month metal* narrowed from $4,450 a tonne to $3,850, writes David Blackwell.

Cash metal added $550 a tonne to Tuesday's massive $2,500 gain, closing at a record $19,450 a tonne, equivalent to $8.82 a lb. Three-month metal rose by $1,150 to $15,600 a tonne.

Prices reached even higher levels in early trading on sporadic *merchant* and *speculative buying.* But traders said there was a tendency to take profits in the afternoon in a fairly subdued market.

Sentiment remains bullish and levels of between $10 and $14 a lb are being predicted, analysts said.

Swedish mining projects agreed

BY SARA WEBB IN STOCKHOLM

BOLIDEN, THE Swedish mining, metals and chemicals company, which is now part of the Trelleborg rubber products group, yesterday signed an agreement with tha Swedish Government to invest SKr1.7bn (£285m) in new mining projects in northern and central Sweden.

Boliden is planning to invest in 15 complex ore mining projects, producing copper, lead, zinc, silver and gold. Work has already started on two of the projects, some of which are new mines whila others involve extending existing mining operations.

Boliden says that by opening up new mineral fields it will be abla to ensure further supplies of raw material for its Roennskaer smelter, which otherwise would have had to stop production by 1996.

The Government is contributing SKr314m in regional aid towards the projects, which will provide 1,200 new jobs in areas that have suffered from above-average levels of unemployment.

The northern region has fared badly compared with the country's unusually low overall unemployment level of 2 per cent, partly because of the difficulties of attracting new businesses to the north and partly because of job cuts in the mining sector.

The industry department yesterday announced that it is *spending SKr1.2bn* on the northern region to help stimulate jobs and development in the area.

When Boliden's job-creation and mining project offer first came out last antumn, it was seen as a means of extracting promises from the Government not to introduce further environmental regulations which would hurt the mining industry.

However, the government is *holding fast to its policy of reducing* industrial pollution, and Boliden now appears *to* have set its sights lower, citing 15 projects *instead* of the original 20, at a cost of SKr1.7bn rather than SKr3bn.

The company said that it was important to have government backing as many of the projects were risky and might prove unviable from a commercial point of view.

Gatt raises dairy products price minimums

By William Dullforce in Geneva

THE GENERAL Agreement on Tariffs and Trade's dairy council raised its minimum prices for dairy products for sale on international markets with effect from noon yesterday.

The naw prices, it aaid, reflected more favourable market conditions and recent successful efforts by governments to contain milk production and deliveries.

The minimum price for butter was increased from $1,000 to $1,100 a tonne and that for anhydrons milk *fat from $1,200* to $1,325.

Minimum export prices for skimmed milk powder and buttermilk powder were raised from $825 to $900 a tonne, while the whole milk powder price climbed from $1,000 to $1,100 a tonne.

Export prices for cheeses covered by Gatt'a International Dairy Arrangement were fixed at a minimum of $1,200 compared with $1,120.

In its annual report on the dairy products market published in December Gatt forecast a rise in butter prices.

Indonesia prepares for crucial negotiations on oil contracts

BY JOHN MURRAY BROWN IN JAKARTA

PERTAMINA, Indonesia's state oil company, is preparing for negotiations with foreign oil companies which could have a profound effect on the shape of country's oil industry in the closing year's of this century.

With production-sharing contracts approaching tha end of their 30-year lives the companies have been reducing reducing capital spending – within the next ten years nine major contracts will have expired.

This means that reserve capacity is not being replaced and a US Embassy report has predicted that Indonesian oil could run out *by the late 1990s if no significant* new discoveries are made.

The drop in investment is already having a dramatic effect on government revenues and, if it continues, it could imperil a series of long term deals under which Caltex, Mobil and other oil majors are to provide gas to Japan, South Korea and Taiwan, beyond the life of their existing contracts.

As talks on contract extensions get underway Mr Abdul Rahman Ramly, Pertamina's president is making encouraging noises about concessions on contract terms. "We'll make changes where necessary," he promises – "more flexibility, speedier approvals, less red tape."

But with so much at stake, Pertaminas approach has been very cautions. The state oil company has rejected an informal offer to negotiate with oil contractors as a group. Although less time-consuming, officials consider this gives the contractors too much leverage.

Instead, each company is being invited to present *its case* individually to the Pertamina team, which is led by Mr Djek Zahar, a former executive with Stanvac. *Mr Zahar is widely respected as a* tough negotiator but also someone who understands the commercial needs of the oil companies.

"It will depend on who you are and what you can negotiate," says one US oil man with long experience of Indonesia. "Doing business here is about contacts not contracts."

One contract term which is not on the negotiating table is the production split. This ensures Pertamina 85 per cent of any discovery, once the contractor has recovered his costs. "That is set in concrete," says one observer, "and the concrete was poured by the president."

President Suharto last year pledged to extend any contract where the company submits a satisfactory investment plan. Progress, however, has been painfully slow.

"The Government knows it is competing for a shrinking pool of capital dollars," a US oil company said. It also recognises that few companies are likely to close down operations, having invested so much in front-end costs, which are particularly heavy in the case of gas production. Indonesia still offers good prospective acreage and a stable political climate. Indeed despite current uncertainties in world oil markets, the country last year signed seven new contracts. This compares with four contracts in 1986.

More critical, however, has been the downturn in both seismic and drilling activity. Mr Ramly says spending by foreign contractors is budgeted to fall 30 per cent this year to around US$2.3bn (£1.25bn) from $3.28bn in 1987-88. "With less than 10 years to run on some blocks, you can't expect the oil companies to spend a single cent," says one western diplomat.

The main sticking point now appears to be the precise definition of when a discovery is commercial. Pertamina will issue a production licence only if it is assured of 49 per cent of the block's total revenues before the *foreign* contractor has extracted costs and a 15 per cent share of production.

The issna clearly becomes *more complicated* at a *time of* fluctuating oil prices. A sodden market downturn can transform the economics of a discovery and leave Pertamina with no benefits. This happened in 1981 on a block operated by Atlantic Richfield, the only occasion when a foreign contractor has been ordered to cease production.

The problem is even more acute when the discovery is in a high risk area, perhaps deep water or dense jungle. The greater development costs involved, all of which are recovered by the contractor, means less oil revenues are available as the Government's share. With so mnch of the better acreage already staked out, it is these high risk areas which are the focus of new investment now proposed by companies wishing to extend contracts.

As an overall strategy the oil *companies seem only too happy* to have a spread of exploration interests. According to Pertamina officials there has been a large number of bids for a block in Irian Jaya, due for sale later this month.

The companies feel, however, *that the terms of such contracts* should reflect the added risks. All costs have to be written-off if no discovery is made or Pertamina refuses *a* production licence.

If as expected Pertamina gives way on the issue of definition, it will probably claw back some ground by restructuring cost recovery in a bid to provide the Government with badly needed revenues.

"I'm sure when the terms are extended," said one senior oil man, "the Government will give it as much publicity as any new contract."

DR SUBROTO, a former president of the Organisation of Petroleum Exporting Countries, has been replaced as Indonesia's Oil and Energy Minister after 10 years in the job.

The new minister is Mr Ginandjar Kartasasmita, a former head of the Indonesian Investment Board.

Dr Subroto was considered a moderating influence at a time when the world's principal oil cartel has looked increasingly divided. He said this week that *Indonesia would do its utmost* to maintain the reference price, at a time when many producers are offering buyer discounts.

"So far we have succeeded in doing so for the Japanese market," he said.

Mr Ginandjar, a Tokyo educated economist, is expected to take a tougher line defending Indonesia's market share at a time of falling oil prices.

He will take Dr Subroto's place on the 5-man Opec price monitoring committee, led by Mr Rilwanu Lukman, the Opec president and Nigerian Oil Minister.

Sugar pact talks

PRODUCER AND consumer delegates hope that a meeting in London today will clear the way for the International Sugar Agreement to come into force at last, writes our commodities staff.

The administrative agreement, which has no price support clauses, was negotiated last September and should have come into operation on January 1. But it has been held up by delayed ratifications.

WORLD COMMODITIES PRICES

LONDON MARKETS

ALUMINIUM PRICES wiped out Tuesday's gains on the London Metal Exchange, with the three-month 99.5 per cent *contract shedding £36 a tonne* on profit-taking yesterday afternoon to close at £1,265.50. Dealers said the market had become nervous of the fact that aluminium had established a premium to the copper price – a situation which they felt was not sustainable for any significant time. Meanwhile cocoa prices rose on shortcovering, higher New York prices *and talk in the market that Brazil's Bahia* temporao crop might be adversely affected by the current dry spell. Concern over the withholding of a sizeable amount of cocoa by the Ivory Coast aided sentiment, dealers said. Coffee prices edged from a 5½-year low on some shortcovering and roaster price fixing. However, the three-month robusta contract closed £2 a tonne down, and dealers said that charts were looking very bearish.

SPOT MARKETS

Crude oil (per barrel FOB)		+ or -
Dubai	$13.65-3.75w	+0.30
Brent Blend	$15.30-5.40y	+0.58
W.T.I.(1 pm est)	$16.60-6.65y	+0.45
Oil products (NWE prompt delivery per tonne CIF)		+ or -
Premium Gasoline	$164-167	-1
Gas Oil (Soviet)	$136-138	+4
Heavy Fuel Oil	$68-70	+2
Naphtha	$136-138	+1
Petroleum Argus Estimates		
Other		+ or -
Gold (per troy oz)♣	$451.25	+3.00
Silver (per troy oz)♣	661c	+17
Platinum (per troy oz)	$511.25	+5.75
Palladium (per troy oz)	$124.25	+0.75
Aluminium (free market)	$2720	+30
Copper (US Producer)	110¾-12c	-½
Lead (US Producer)	35.5c	
Nickel (free market)	880c	+100
Tin (European free market)	£3742.5	-22.5
Tin (Kuala Lumpur market)	17.40r	-0.02
Tin (New York)	319.50c	-0.25
Zinc (Euro. Prod. Price)	$920	
Zinc (US Prime Western)	49⅝c	+1
Cattle (live weight)†	108.74p	+0.24*
Sheep (dead weight)†	195.38p	+15.28*
Pigs (live weight)†	88.71p	-1.40*
London daily sugar (raw)	$235.4s	+9.2
London daily sugar (white)	$242.0s	+8.5
Tate and Lyle export price	£235.5	+5.0
Barley (English feed)	£107.0w	-0.5
Maize (US No. 3 yellow)	£135.5x	
Wheat (US Dark Northern)	£92.75s	+0.25
Rubber (spot)♥	62.50p	
Rubber (Apr) ♥	66.50p	
Rubber (May) ♥	66.50p	
Rubber (KL RSS No 1 Mar)	286.5my	
Coconut oil (Philippines)§	$605.0s	
Palm Oil (Malaysian)§	$380.0u	+5.0
Copra (Philippines)§	$350.0y	
Soyabeans (US)	£157.0	-1.0
Cotton "A" index	66.75c	+0.15
Wooltops (64s Super)	570p	

£ a tonne unless otherwise stated. p-pence/kg. c-cents/lb. r-ringgit/kg. w-May. u-Apr/Sep. x-Apr/Jun. y-Apr. t-May/Jun. s-Apr/May.†Meat Commission average fatstock prices. * change from a week ago. ♥London physical market. §CIF Rotterdam. ♣ Bullion market close. m-Malaysian/Singapore cents/kg.

COCOA £/tonne

	Close	Previous	High/Low	
Mar	917	905	916	906
May	937	923	938	924
Jly	957	942	957	943
Sep	978	961	978	965
Dec	996	984	995	989
Mar	1022	1009	1021	1013
May	1041	1029	1041	1032

Turnover: 3650 (2233) lots of 10 tonnes
ICCO indicator prices (SDRs per tonne). Daily price for March 22 : 1203.09 (1204.67) .10 day average for March 23 : 1218.01 (1224.51).

COFFEE £/tonne

	Close	Previous	High/Low	
Mar	1085	1095	1094	1085
May	1125	1127	1125	1115
Jly	1148	1151	1148	1141
Sep	1173	1176	1173	1165
Nov	1200	1201	1195	1189
Jan	1217	1226	1217	1216
Mar	1240	1250	1240	

Turnover: 2876 (2851) lots of 5 tonnes
ICO indicator prices (US cents per pound) for March 22: Comp. daily 1979 115.61 (115.85); 15 day average 118.07 (118.30).

SUGAR $ per tonne

Raw	Close	Previous	High/Low	
May	197.40	201.20	214.40	197.00
Aug	197.00	200.80	214.00	197.00
Oct	196.80	201.40	203.20	198.40
Dec	196.00		202.00	201.00
Mar	196.40	199.00	202.20	198.00
May	198.00	200.00	210.80	

White	Close	Previous	High/Low	
May	237.00	241.00	242.80	237.00
Aug	238.00	243.00	242.50	237.80
Oct	237.50	241.00	241.00	
Dec	236.00	240.00	237.00	
Mar	237.50	243.00	244.00	237.50
May	239.00	243.00		
Aug	242.00	245.00		

Turnover: Raw 8297 (3468)lots of 50 tonnes; White 1140 (1097).
Paris- White (FFr per tonne): May 1364, Aug 1372, Oct 1375, Dec 1375, Mar 1385, May 1405

GAS OIL $/tonne

	Close	Previous	High/Low	
Apr	133.50	130.50	134.75	130.25
May	130.50	128.00	131.50	127.50
Jun	130.75	128.75	131.00	128.75
Jul	130.25	128.75	131.00	128.75
Aug	131.00	130.50		

Turnover: 7491 (8252) lots of 100 tonnes

GRAINS £/tonne

Wheat	Close	Previous	High/Low	
Mar	102.10	103.15	102.15	102.00
May	103.75	103.70	103.90	103.75
Jly	105.85	105.80	106.00	105.85
Sep	100.15	100.55	100.25	100.10
Nov	101.80	102.40	102.25	101.80
Jan	104.30	104.75	104.70	104.30
Mar	106.15	106.65	106.55	106.15

Barley	Close	Previous	High/Low	
Mar	101.85	101.85	101.75	101.55
May	103.65	103.55	103.65	103.55
Sep	97.35	97.70	97.35	
Nov	100.25	100.40	100.25	
Jan	102.50	102.65	102.65	102.50
Mar	104.25	104.65	104.25	

Turnover: Wheat 150 (152) . Barley 34 (22) lots of 100 tonnes.

LONDON METAL EXCHANGE (Prices supplied by Amalgamated Metal Trading)

	Close	Previous	High/Low	AM Official	Kerb close	Open interest
Aluminium, 99.7% purity ($ per tonne)						Ring turnover 0 tonne
Cash	2660-80	2700-20		2710-30		
3 months	2335-45	2390-410	2380/2380	2380-90	2325-45	3,845 lots
Aluminium, 99.5% purity (£ per tonne)						Ring turnover 15,800 tonne
Cash	1440-5	1476-80	1482/1478	1482-4		
3 months	1265-6	1301-2	1293/1259	1293-4	1265-6	44,332 lots
Copper, Grade A (£ per tonne)						Ring turnover 28,875 tonne
Cash	1292-4	1277-9	1292	1292-3		
3 months	1212-3	1202-4	1220/1210	1212-3	1218-20	67,527 lots
Copper, Standard (£ per tonne)						Ring turnover 0 tonne
Cash	1250-60	1240-50		1262-5		
3 months	1185-95	1180-90		1185-95		13 lots
Silver (US cents/fine ounce)						Ring turnover 0 ozs
Cash	655-8	642-5		644-7		
3 months	674-6	655-8		655-8	665-70	858 lots
Lead (£ per tonne)						Ring turnover 10,200 tonne
Cash	344.5-6	344-6	345	344.5-5		
3 months	331.5-2	329-30	334/331	331-1.5	333-4	9,951 lots
Nickel ($ per tonne)						Ring turnover 1,704 tonne
Cash	19300-600	18800-9000	19600/19200	19100-200		
3 months	15500-700	14400-500	16094/14440	15300-400	15450-500	8,207 lots
Zinc (£ per tonne)						Ring turnover 10,800 tonne
Cash	554.5-5.5	551-2		552.5-4.5		
3 months	546-5.5	547-7.5	549/546	547.5-8	547.5-8	14,713 lots

POTATOES £/tonne

	Close	Previous	High/Low	
Apr	140.4	136.8	140.8	137.0
May	145.0	143.5	145.5	142.5
Nov	93.9	94.0	94.0	
Feb	103.0	103.0		
Apr	140.5	140.0	141.0	140.0

Turnover: 620 (919) lots of 100 tonnes.

SOYABEAN MEAL £/tonne

	Close	Previous	High/Low	
Apr	131.00	130.00	130.00	129.00
Jun	127.00	126.40	127.50	
Aug	124.50	123.80	124.00	
Oct	124.20	125.20	125.00	
Dec	129.00	129.00	129.00	128.50

Turnover: 1835 (185) lots of 100 tonnes.

FREIGHT FUTURES $10/index point

	Close	Previous	High/Low	
Apr	1720.0	1734.0	1740.0	1705.0
Jly	1597.0	1592.0	1600.0	1590.0
Oct	1605.0	1607.0	1610.0	1595.0
Jan	1605.0	1605.0	1610.0	1600.0
BFI	1648.5	1647.5		

Turnover: 392 (386)

WOOL
With the Easter recess in Australian wool sales due to start next week there is no sign whatever of any slackening in world demand, especially for Merino types. Similar buoyancy is evident in those sectors of the UK industry using these wools. Where uncertainty arises is whether new business will be placed on a large scale to refill order books. Present Merino price levels have yet to be passed on fully. The AWC market indicator is at another new peak of 1175 cents a kg., compared with 1161 a week ago. Bradford top prices are scarcely tested but hopeful increases of 5 or 10 pence a kg. Merino quotations are creeping through, taking 64's super to 585 pence and occasionally well beyond.

LONDON BULLION MARKET

Gold (fine oz)	$ price	£ equivalent
Close	451-451½	245¼-245¾
Opening	450-450½	245¼-245¾
Morning fix	450.00	245.066
Afternoon fix	448.50	244.459
Day's high	451¼-452¼	
Day's low	448-448½	

Coins	$ price	£ equivalent
US Eagle	464½-469½	252½-255½
Maple leaf	464½-469½	252½-255½
Britannia	464½-469½	252½-255½
Krugerrand	449¾-452¾	244½-246½
1/2 Krug	233½-242½	127-131⅞
1/4 Krug	116½-128½	62⅞-67⅛
Angel	460-465	250¼-252⅞
1/10 Angel	45½-50½	24¾-27½
New Sov.	106-107	57½-58¼
Old Sov.	106-107½	57½-58½
Noble Plat	528⅞-533½	288-291½

Silver fix	p/fine oz	US cts equiv
Spot	352.85	647.80
3 months	360.35	658.75
6 months	368.45	670.55
12 months	384.35	694.60

LONDON METAL EXCHANGE TRADED OPTIONS

Aluminium (99.7%)	Calls		Puts	
Strike price $ tonne	May	July	May	July
2200	296	198	47	128
2300	225	148	76	180
2400	159	110	120	240

Aluminium (99.5%)	Calls		Puts	
2200	283	195	43	163
2300	223	151	72	218
2400	165	116	113	280

Copper (Grade A)	Calls		Puts	
2150	208	204	72	169
2250	151	160	114	223
2350	105	124	167	285

US MARKETS

After a quiet opening, the precious metals reacted to the rally in energy futures as local and speculative buying touched-off *stops, reports Drexel Burnham Lambert.* However, the markets failed to penetrate overhead resistance and fell back to close with pared gains. Copper firmed as commission house buying touched off stops. Energy futures rallied on speculative buying in markets influenced by conflicting and unconfirmed reports concerning O.P.E.C. Coffee rallied on short-covering and technical buying firmed cocoa. Sugar fell on disappointed long-liquidation following the market's failure to penetrate overhead resistance. In response to higher cash prices, live cattle futures made new contract highs, but the fell on profit-taking. Hogs and bellies came under pressure as cash prices fell, with the exception of August hogs where one commercial buyer held the contract firm. The soybean complex opened firm in response to outside markets, but then gave up ground as fund *and commercial selling emerged. Corn* felt reflecting a weak cash market while wheat derived support from a possible bid by the U.S.S.R. and reports that Poland may be in the market for U.S. grain.

New York

GOLD 100 troy oz.; $/troy oz.

	Close	Previous	High/Low	
Mar	451.1	449.7	449.4	449.4
Apr	452.0	449.8	454.0	449.0
Jun	456.4	454.0	458.5	453.5
Aug	460.9	458.4	462.8	458.1
Oct	465.8	463.2	467.0	465.5
Dec	470.9	468.1	473.0	467.5
Feb	476.0	473.2	0	0
Apr	481.5	478.8	0	0
Jun	487.0	484.0	487.4	487.4

PLATINUM 50 troy oz; $/troy oz.

	Close	Previous	High/Low	
Mar	513.5	510.4	0	0
Apr	514.5	511.4	516.5	510.5
Jul	519.6	516.4	521.0	515.1
Oct	525.0	521.0	526.0	521.5
Jan	530.9	527.5	532.0	529.5
Apr	536.8	533.2	0	0

SILVER 5,000 troy oz; cents/troy oz.

	Close	Previous	High/Low	
Mar	661.0	645.5	650.5	645.0
Apr	662.7	649.2	0	0
May	665.0	651.5	670.0	648.0
Jul	674.4	659.5	678.0	657.0
Sep	682.4	667.6	685.0	670.0
Dec	695.7	680.5	700.0	680.0
Jan	699.8	684.4	0	0
Mar	709.2	693.6	710.0	695.0
May	718.3	702.7	0	0
Jul	728.1	712.6	0	0

COPPER 25,000 lbs; cents/lbs

	Close	Previous	High/Low	
Mar	107.70	103.40	107.90	104.20
Apr	104.70	100.80	0	0
May	98.70	96.00	98.95	97.00
Jul	94.00	91.90	94.30	92.70
Sep	90.80	88.75	90.50	89.60
Dec	86.70	85.50	86.80	86.00
Jan	85.60	84.60	0	0
Mar	84.00	83.50	84.00	83.90
May	83.00	82.80	0	0
Jul	82.00	81.50	83.00	83.00

CRUDE OIL (Light) 42,000 US galls $/barrel

	Close	Previous	High/Low	
May	16.83	16.37	16.92	16.26
Jun	16.71	16.20	16.85	16.19
Jul	16.65	16.23	16.70	16.14
Aug	16.54	16.18	16.65	16.10
Oct	16.35	16.13	16.35	16.04
Nov	16.30	15.11	16.30	16.02
Dec	16.40	16.09	16.40	15.96
Jan	16.50	16.07	16.50	16.26
Feb	16.41	16.05	16.42	15.96

HEATING OIL 42,000 US galls, cents/US galls

	Close	Previous	High/Low	
Apr	47.35	46.26	47.55	46.00
May	45.65	44.26	45.80	43.95
Jun	44.40	43.40	44.70	43.00
Jul	44.25	43.01	44.35	42.90
Aug	44.70	43.51	44.70	43.50

COCOA 10 tonnes;$/tonnes

	Close	Previous	High/Low	
May	1592	1572	1598	1584
Jul	1616	1598	1619	1597
Sep	1645	1631	1646	1629
Dec	1682	1665	1685	1665
Mar	1717	1690	1712	1710
May	1740	1723	0	0
Jul	1763	1746	1763	1733

COFFEE "C" 37,500lbs; cents/lbs

	Close	Previous	High/Low	
May	133.96	132.50	134.25	132.40
Jul	135.93	134.81	136.25	134.50
Sep	137.85	136.50	138.15	136.60
Dec	140.25	139.25	140.75	139.00
Mar	140.75	140.43	141.90	140.50
May	142.00	141.50	0	0
Jul	142.50	141.75	0	0

SUGAR WORLD "11" 112,000 lbs; cents/lbs

	Close	Previous	High/Low	
May	8.67	9.06	9.12	8.66
Jul	8.78	9.00	9.04	8.75
Oct	8.78	8.98	9.04	8.76
Jan	8.78	8.75	0	0
Mar	8.76	8.67	8.95	8.75
May	8.75	8.87	8.91	8.70
Jul	8.73	8.95	0	0

COTTON 50,000; cents/lbs

	Close	Previous	High/Low	
May	63.09	63.43	64.10	63.05
Jul	62.75	62.73	63.43	62.55
Oct	59.55	59.35	60.00	59.50
Dec	59.00	58.46	58.70	58.00
Mar	59.20	59.25	59.50	59.20
May	59.40	58.90	59.70	59.40

ORANGE JUICE 15,000 lbs; cents/lbs

	Close	Previous	High/Low	
May	164.70	163.50	165.60	163.20
Jul	160.30	159.50	161.10	159.00
Sep	155.50	155.00	156.75	155.20
Nov	152.25	152.25	154.00	153.00
Jan	149.00	148.95	150.00	146.00
Mar	147.75	146.45	0	0
May	147.75	148.95	0	0
Jul	147.75	148.95	0	0

INDICES

REUTERS (Base: September 18 1931 = 100)

Mar 22	Mar 21	mnth ago	yr ago
1729.1	1732.0	1763.2	1529.6

DOW JONES (Base: December 31 1974 = 100)

Spot	130.28	128.74	129.80	115.08
Futures	132.28	132.72	134.00	115.15

Chicago

SOYABEANS 5,000 bu min; cents/60lb bushel

	Close	Previous	High/Low	
May	639/6	643/0	644/4	638/4
Jul	646/0	651/6	653/0	645/0
Aug	651/2	665/0	656/4	646/6
Sep	658/0	657/0	657/0	650/0
Nov	661/4	665/6	667/0	657/0
Jan	669/4	674/2	674/4	665/4
Mar	676/0	679/0	681/0	674/0
May	681/0	686/0	685/0	678/0
Jul	685/0	0	689/0	684/0

SOYABEAN OIL 60,000 lbs; cents/lb

	Close	Previous	High/Low	
May	20.53	20.64	20.75	20.40
Jul	20.86	20.96	21.10	20.70
Aug	21.00	21.10	21.23	20.95
Sep	21.08	21.18	21.40	21.08
Oct	21.15	21.25	21.46	21.15
Dec	21.46	21.59	21.70	21.43
Jan	21.46	21.62	21.90	21.48
Mar	21.82	21.50	21.50	21.55

SOYABEAN MEAL 100 tons; $/ton

	Close	Previous	High/Low	
May	191.1	192.9	193.5	190.1
Jul	191.0	193.6	194.5	190.8
Aug	192.5	194.5	195.0	191.8
Sep	193.2	195.0	195.2	192.5
Oct	193.0	195.5	196.0	193.0
Dec	195.5	198.2	199.0	195.5
Jan	196.2	199.5	197.0	196.0
Mar	199.2	201.0	200.0	199.0
May	200.5	0	200.5	200.5

MAIZE 5,000 bu min; cents/56lb bushel

	Close	Previous	High/Low	
May	206/2	208/4	207/2	205/6
Jul	211/2	212/0	212/4	210/6
Sep	215/4	216/4	216/6	214/6
Dec	220/0	221/4	222/0	218/6
Mar	227/0	228/4	228/4	225/4
May	231/0	232/0	233/0	230/0
Jul	233/0	0	233/0	233/0

WHEAT 5,000 bu min; cents/60lb-bushel

	Close	Previous	High/Low	
May	307/2	307/4	309/4	307/0
Jul	314/6	314/0	316/0	314/4
Sep	321/0	320/4	323/0	321/0
Dec	331/2	331/2	333/4	331/0
Mar	336/4	335/4	337/0	336/0

LIVE CATTLE 40,000 lbs; cents/lbs

	Close	Previous	High/Low	
Apr	74.35	74.25	74.57	73.82
Jun	71.77	71.50	72.15	71.52
Aug	68.10	68.42	68.45	67.90
Oct	66.90	67.15	67.25	66.75
Dec	67.60	68.10	68.20	67.70
Feb	67.70	68.00	68.20	67.60
Apr	68.00	68.00	69.02	68.00

LIVE HOGS 30,000 lb; cents/lbs

	Close	Previous	High/Low	
Apr	45.90	46.57	46.45	45.77
Jun	50.35	50.75	50.57	50.25
Jul	50.32	50.62	50.65	50.02
Aug	47.35	47.15	47.80	46.90
Oct	43.22	43.20	43.90	43.00
Dec	44.05	43.90	44.20	43.55
Feb	43.42	43.55	43.70	43.30
Apr	41.30	41.15	41.60	41.25

PORK BELLIES 38,000 lbs; cents/lb

	Close	Previous	High/Low	
Mar	55.10	55.45	55.75	54.80
May	56.22	56.50	56.85	55.60
Jul	56.52	56.85	57.25	56.10
Aug	55.45	55.85	56.05	54.95
Feb	57.80	57.75	58.50	57.60
Mar	57.00	57.00	57.60	56.95

CURRENCIES, MONEY AND CAPITAL MARKETS

FOREIGN EXCHANGES

Pound moves above DM3.10

CURRENCIES SUPPORTED by high growth and attractive interest rates were at the centre of attention on the foreign exchanges yesterday.

Sterling, the Canadian dollar and Australian dollar were underpinned by high interest rates, while these currencies, plus the Japanese yen, were also in favour because of strong domestic growth rates.

Dealers said that at times of stability in the dollar the market looks for alternative trading, and is finding it in the cross rates between sterling/D-Mark and yen/D-Mark.

Good, steady business was reported in these currencies yesterday.

The Bank of England intervened when the pound rose above DM3.1100, but dealers found it hard to decide whether this was on a large scale.

The general opinion was that it represented little more than a smoothing operation, and that sterling's retreat to DM3.1050 at the close was partly the result of profit taking. It was still higher than Tuesday's finish of DM3.0975, and the highest close since July 1986.

The pound also rose 60 points to $1.8350-1.8360, and advanced to Y232.75 from Y232.50 and to FFr10.5450 from FFr10.5250. It closed unchanged at SFr2.5650.

Sterling's exchange rate index, according to the Bank of England, rose 0.2 to 77.3.

Trading in the dollar was very quiet, with the currency gaining no direction from news on February US consumer prices, and revised fourth quarter GNP growth.

The dollar fell to DM1.6910 from DM1.6935; to Y126.80 from Y127.10; to SFr1.3975 from SFr1.4015; and to FFr5.7459 from FFr5.7525.

On Bank of England figures, the dollar's index declined to 93.8 from 94.0.

D-MARK - Trading range against the dollar in 1987/88 is 1.9305 to 1.5740. February average 1.6966. Exchange rate index 148.6 against 146.4 six months ago.

The D-Mark lost ground to the yen in Frankfurt yesterday, leading to speculation that the Bank of Japan may soon decide it is necessary to intervene, selling the yen against the West German currency.

Dealers suggested this could lead to political problems between Bonn and Tokyo, if the Japanese authorities are seen to disrupt relationships between European currencies.

The French franc appears to be potentially weak, ahead of the French Presidential election, but was steady yesterday, closing slightly firmer against the D-Mark, at DM29.44 per 100 francs, against DM29.42 on Tuesday. There was no reaction to news that President Mitterrand will seek election for a second term of office.

The yen closed at DM1.3350 per 100 yen in Frankfurt, the highest level since August 1986, compared with DM1.3310 previously.

The dollar traded very quietly, and the Bundesbank did not intervene when it was fixed at DM1.6945, against DM1.6914 previously.

JAPANESE YEN - Trading range against the dollar in 1987/88 is 159.45 to 121.35. February average 129.17. Exchange rate index 242.9 against 221.3 six months ago.

Interest in Tokyo was concentrated on high yielding currencies, such as the Australian dollar and sterling. The Australian dollar had climbed to its highest level for two years against the US dollar in New York, but dealers in Tokyo were reluctant to put further upward pressure on the currency, after intervention by the Australian Reserve Bank.

Sterling also came under the spotlight, but closed below $1.83 in Tokyo on profit taking.

The dollar was confined to a narrow trading range, closing at Y127.15, compared with Y127.05 on Tuesday, and Y127.00 overnight in New York.

£ IN NEW YORK

Mar.23	Latest	Previous Close
£ Spot	1.8370-1.8380	1.8325-1.8335
1 month	0.30-0.28pm	0.32-0.28pm
3 months	0.79-0.75pm	0.82-0.77pm
12 months	2.77-2.67pm	2.88-2.76pm

Forward premiums and discounts apply to the US dollar

STERLING INDEX

	Mar.23	Previous
8.30 am	77.2	77.0
9.00 am	77.2	77.0
10.00 am	77.3	77.0
11.00 am	77.3	77.0
Noon	77.3	77.0
1.00 pm	77.3	77.0
2.00 pm	77.4	77.0
3.00 pm	77.4	77.0
4.00 pm	77.3	77.1

EMS EUROPEAN CURRENCY UNIT RATES

	Ecu central rates	Currency amounts against Ecu Mar.23	% change from central rate	% change adjusted for divergence	Divergence limit %
Belgian Franc	42.4582	43.3830	+2.18	+0.92	±1.5344
Danish Krone	7.85212	7.94875	+1.23	-0.03	±1.5404
German D-Mark	2.05853	2.07380	+0.74	-0.52	±1.0981
French Franc	6.90403	7.04293	+2.01	+0.75	±1.3674
Dutch Guilder	2.31943	2.32921	+0.42	-0.84	±1.5012
Irish Punt	0.768411	0.775197	+0.88	-0.38	±1.6684
Italian Lira	1483.58	1534.58	+3.44	+2.75	±4.0752

Changes are for Ecu, therefore positive change denotes a weak currency. Adjustment calculated by Financial Times.

CURRENCY RATES

Mar.23	Bank rate %	Special* Drawing Rights	European Currency Unit
Sterling	-	0.747277	0.666809
U.S. Dollar	6	1.36677	1.22326
Canadian $	8.75	1.70409	1.52321
Austrian Sch.	3	16.2495	14.5764
Belgian Franc	6¼	48.3939	43.3830
Danish Krone	7½	8.88059	7.94875
[illegible]	[illegible]	[illegible]	[illegible]

*All SDR rates are for Mar.22

POUND SPOT- FORWARD AGAINST THE POUND

Mar.23	Day's spread	Close	One month	% p.a.	Three months	% p.a.
US	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Canada	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Netherlands	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Belgium	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Denmark	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Ireland	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
W. Germany	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Portugal	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Spain	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Italy	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Norway	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
France	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Sweden	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Japan	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Austria	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Switzerland	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Belgian rate is for convertible francs. Financial franc [illegible]

DOLLAR SPOT- FORWARD AGAINST THE DOLLAR

[illegible]

CURRENCY MOVEMENTS

[illegible]

EURO-CURRENCY INTEREST RATES

[illegible]

OTHER CURRENCIES

[illegible]

EXCHANGE CROSS RATES

[illegible]

FINANCIAL FUTURES

Gilts relinquish early gains

UK LONG gilt and short sterling futures finished below the day's highs in the Liffe market yesterday. However closing values were still placed above Tuesday's settlement prices, but shed much of their early gains after the Bank of England stepped in to curb the rise in sterling.

The pound's retreat from a high of DM3.1150 encouraged some short term investors to take profits. Traders also voiced concern that continued upward pressure on the pound increased fears that the authorities may be pushed into reducing base rates again, which could lead to overheating in the economy and higher inflation.

While sterling's renewed strength created uncertainty, investors were also waiting for tomorrow's release of UK trade figures for February as well as the retail price index.

The June long gilt contract opened at 122-01, up from 121-25 and rose to high of 122-11 before slipping back to close at 122-08.

Three-month sterling deposits touched a high of 91.28 for June delivery before falling back to 91.24 at the close, compared with 91.22 at the start and 91.19 on Tuesday.

US Treasury bond futures finished on a weaker note. After opening at 90-24, the price for June delivery was marked down to a low of 90-13, finishing at 90-16 compared with 90-28 on Tuesday. US consumer prices rose by 0.2 p.c. in February after a 0.3 p.c. rise in January, to give a year on year rise of 3.9 p.c. These figures were in line with expectations and had no effect on trading. A second revision to US 4th quarter GNP to a rise of 4.8 p.c. from 4.5 p.c. previously, was a little stronger than expected but failed to have an impact on trading.

Liffe traders stressed that the volume dealt in all contracts was relatively low.

LIFFE LONG GILT FUTURES OPTIONS

Strike Price	Calls-settlements Jun	Calls-settlements Sep	Puts-settlements Jun	Puts-settlements Sep
116	617	—	11	—
118	433	—	27	—
120	300	—	58	—
122	153	—	147	—
124	101	—	259	—
126	32	—	426	—
128	15	—	609	—

Estimated volume total, Calls 3585 Puts 1863
Previous day's open int. Calls 30610 Puts 22159

LIFFE US TREASURY BOND FUTURES OPTIONS

Strike Price	Calls-settlements Jun	Calls-settlements Sep	Puts-settlements Jun	Puts-settlements Sep
84	650	634	18	102
86	506	507	38	139
88	334	357	102	225
90	211	250	143	318
92	112	162	244	430
94	38	122	406	554
96	19	57	551	725

Estimated volume total, Calls 225 Puts 470
Previous day's open int. Calls 1199 Puts 1316

LIFFE FT-SE INDEX FUTURES OPTIONS

Strike Price	Calls-settlements Mar	Calls-settlements Apr	Puts-settlements Mar	Puts-settlements Apr
17000	1290	1507	0	47
17500	790	1079	0	119
18000	305	717	15	257
18500	29	436	239	476
19000	0	241	710	781
19500	0	121	1210	1161
20000	0	55	1710	1595

Estimated volume total, Calls 2 Puts 4
Previous day's open int. Calls 112 Puts 164

LIFFE £/$ OPTIONS

[illegible]

LIFFE EURODOLLAR OPTIONS

[illegible]

LIFFE SHORT STERLING

[illegible]

PHILADELPHIA SE £/$ OPTIONS

[illegible]

LONDON (LIFFE)

[illegible]

CHICAGO

[illegible]

CURRENCY FUTURES

[illegible]

MONEY MARKETS

London rates a little lower

INTEREST RATES were slightly lower in London, as the pound broke through DM3.10, and the Bank of England intervened to stem sterling's rise. Dealers saw little prospect of an early cut in bank base rates however.

Three-month interbank money was lower at 8 11/16-8 9/16 p.c. compared with 8 13/16-8¾ p.c. while the one year rate remained at 9 3/16-9 1/16 p.c. Lack of movement in longer term rates reflected investors' unease about future trends on inflation and UK balance of payments.

Overnight interbank money opened at 8¾-8½ p.c. and rose to a high of 10 p.c before slipping to 7 p.c. However late balances were bid at 9 p.c.

UK clearing bank base lending rate 8½ per cent from March 17

The Bank of England forecast a shortage of around £600m, with factors affecting the market including repayment of late assistance and bills maturing in official hands, together with a take up of Treasury bills draining £451m and a rise in the note circulation of £110m. In addition banks brought forward balances £70m below target. These were partly offset by Exchequer transactions which added £40m.

The forecast was revised to a shortage of around £650m, and the Bank gave assistance in the morning of £41m through outright purchases of £23m of eligible bank bills in band 1 and £18m in band 2, all at 8⅜ p.c.

Additional help was provided in the afternoon of £299m through outright purchases of £297m of eligible bank bills in band 1 and £2m in band 2, all at 8⅜ p.c. Late assistance came to £315m, making a total of £655m.

In Frankfurt call money eased to 3.25 p.c. from 3.30 p.c. as traders registered their surprise at the size of the Bundesbank's allocation at the latest sale and repurchase facility.

Liquidity levels had been seen as comfortable, so the authorities' decision to allocate DM14.6bn in place of maturities of DM11.9bn was unexpected. One dealer suggested that, by its actions, the Bundesbank was keen to keen to prevent any rise in rates.

FT LONDON INTERBANK FIXING

[illegible]

MONEY RATES

NEW YORK (Lunchtime)

[illegible]

LONDON MONEY RATES

[illegible]

EUROPEAN OPTIONS EXCHANGE

Series		May 88 Vol	May 88 Last	Aug. 88 Vol	Aug. 88 Last	Nov. 88 Vol	Nov. 88 Last	Stock
GOLD C	$ 440	12	21	5	31.50	3	44	$ 451.20
GOLD C	$ 460	-	-	21	21	11	30	$ 451.20
GOLD C	$ 480	100	3.80 A	104	12	9	20	$ 451.20
GOLD C	$ 500	103	2	-	-	-	-	$ 451.20
GOLD C	$ 520	3	0.90	12	9.70	-	...	$ 451.20
GOLD C	$ 540	300	0.50	-	-	-	-	$ 451.20
GOLD P	$ 420	175	2.50	50	6.30	90	9.50	$ 451.20
		Apr. 88		May 88		Jun 88		
EOE Index C	Fl. 185	15	28	20	25.50 B	-	-	Fl. 213.31
EOE Index C	Fl. 200	29	19	323	14.40	-	-	Fl. 213.31
EOE Index C	Fl. 205	83	10.70	32	11.60	-	-	Fl. 213.31
EOE Index C	Fl. 210	41	7.20	2	8.70 B	1	10.50	Fl. 213.31
EOE Index C	Fl. 215	244	4.70	23	6.50	123	8.70	Fl. 213.31
EOE Index P	Fl. 195	53	1.80	4	5	106	7 A	Fl. 213.31
EOE Index P	Fl. 200	43	2.70	203	6.20	5	9	Fl. 213.31
EOE Index P	Fl. 205	12	4.20	5	8.50	1	11	Fl. 213.31
EOE Index P	Fl. 210	40	6	-	-	3	14.50	Fl. 213.31
£/Fl C	Fl. 345	72	9.30	-	-	-	-	Fl. 349.50
$/Fl C	Fl. 185	20	5.30	-	-	-	-	Fl. 190.15
$/Fl C	Fl. 190	79	1.80	145	2.80	-	-	Fl. 190.15
$/Fl C	Fl. 195	-	-	5	1.10	25	1.40	Fl. 190.15
$/Fl P	Fl. 180	-	-	-	-	100	0.90	Fl. 190.15
$/Fl P	Fl. 185	-	-	2	1.50	15	2.30	Fl. 190.15
$/Fl P	Fl. 190	30	2.20	-	-	-	-	Fl. 190.15
		Apr 88		Jul. 88		Oct. 88		
ABN C	Fl. 45	-	-	263	1.20	128	1.80	Fl. 42
ABN P	Fl. 40	6	0.60	122	2.20	74	3.40 B	Fl. 42
AEGON C	Fl. 75	131	1.40	52	2.50	-	-	Fl. 73.50
AHOLD C	Fl. 75	131	1.40	34	3.90	-	-	Fl. 72.40
AHOLD P	Fl. 65	170	0.50	-	-	10	2.50	Fl. 72.40
AKZO C	Fl. 110	732	3	126	5.90	60	9	Fl. 108.80
AKZO P	Fl. 110	63	4	23	9.60	104	12	Fl. 108.80
AMEV C	Fl. 60	430	1.80	563	3.40	98	4.50	Fl. 57.10
AMEV P	Fl. 60	5	9.40	132	7.50	-	-	Fl. 57.10
AMRO C	Fl. 70	62	3	191	4.10	91	9.70	Fl. 71.90
AMRO P	Fl. 70	38	1.50	21	4	10	5.70	Fl. 71.90
BUHRMANN-T C	Fl. 45	127	3	5	4	-	-	Fl. 46.90
ELSEVIER C	Fl. 50	360	3.40	271	4.50	12	6.20	Fl. 52.80
ELSEVIER P	Fl. 50	50	0.80	27	2.60	7	4.20	Fl. 52.80
GIST-BROC. C	Fl. 35	606	2	291	3.20	50	4	Fl. 35.90
GIST-BROC P	Fl. 30	15	0.20	83	1.20	24	2.30	Fl. 35.90
HEINEKEN C	Fl. 130	230	6	60	10	20	12.20	Fl. 133.50
HEINEKEN P	Fl. 120	-	-	30	2.80	2	6	Fl. 133.50
HOOGOVENS C	Fl. 35	463	4.50	223	5.70	98	7.20	Fl. 38.30
HOOGOVENS P	Fl. 27.50	129	0.10	-	-	-	-	Fl. 38.30
KLM C	Fl. 35	1609	2	296	5.50	333	9	Fl. 36
KLM P	Fl. 35	181	0.80	191	2.30	13	5.40	Fl. 36
KNP C	Fl. 140	34	2.70	6	6.20	4	8	Fl. 139.50
KNP P	Fl. 130	9	2.80	22	6.40	-	-	Fl. 139.50
NEDLLOYD C	Fl. 210	217	9.80 B	196	19.50	11	22	Fl. 212.50
NEDLLOYD P	Fl. 210	133	7.40	21	17.50	-	-	Fl. 212.50
NAT.NED C	Fl. 65	56	0.80	124	2	14	2.30	Fl. 60.60
NAT.NED P	Fl. 65	50	5	-	-	-	-	Fl. 60.60
PHILIPS C	Fl. 30	265	1	264	1.80	102	2.60	Fl. 29.70
PHILIPS P	Fl. 27.50	36	0.50 B	184	1.60	-	-	Fl. 29.70
ROYAL DUTCH C	Fl. 230	632	2.20	287	6	54	8	Fl. 228.20
ROYAL DUTCH P	Fl. 210	168	0.70	395	5	-	-	Fl. 228.20
ROBECO C	Fl. 85	11	7	5	8.50	-	-	Fl. 91.80
UNILEVER C	Fl. 120	108	1.80	262	4.80	11	7	Fl. 116.80
UNILEVER P	Fl. 110	127	1.10	38	4.80	-	-	Fl. 116.60

TOTAL VOLUME IN CONTRACTS : 35,134

A = Ask B = Bid C = Call P = Put

BASE LENDING RATES

	%		%		%
ABN Bank	8½	Citibank NA	8½	Nat. Bk. of Kuwait	8½
Adam & Company	8½	City Merchants Bank	8½	NatWestminster	8½
AAB - Allied Arab Bk	8½	Clydesdale Bank	8½	Northern Bank Ltd	8½
Allied Irish Bank	8½	Comm. Bk N. East	8½	Norwich Gen. Trust	8½
Henry Ansbacher	8½	Consolidated Cred	8½	PK Finans. Int(UK)	9
ANZ Banking Group	9	Co-operative Bank	*8½	Provincial Bank PLC	9½
Associates Cap Corp	10	Cyprus Popular Bk	8½	R. Raphael & Sons	8½
Authority Bank	8½	Dunbar Bank PLC	8½	Roxburghe G'rantee	10
B & C Merchant Bank	8½	Duncan Lawrie	8½	Royal Bk of Scotland	8½
Banco de Bilbao	9½	Equatorial Bank plc	9	Royal Trust Bank	8½
Bank Hapoalim	8½	Exeter Trust Ltd	9	Smith & Williman Secs.	8½
Bank Leumi (UK)	8½	Financial & Gen. Sec	8½	Standard Chartered	8½
Bank Credit & Comm	8½	First Nat. Sec. Ltd	9½	TSB	8½
Bank of Cyprus	8½	● Robert Fleming & Co.	8½	UDT Mortgage Exp	‡10.2
Bank of Ireland	8½	Robert Fraser & Ptnrs.	9½	United Bk of Kuwait	8½
Bank of India	8½	Girobank	8½	United Mizrahi Bank	8½
Bank of Scotland	8½	Grindlays Bank	9	Unity Trust Bank Plc	8½
Banque Belge Ltd	8½	● Guinness Mahon	8½	Western Trust	8½
Barclays Bank	8½	HFC Trust & Savings	8½	Westpac Bank Corp.	8½
Benchmark Bank PLC	8½	● Hambros Bank	8½	Whiteaway Laidlaw	9
Berliner Bank AG	8½	Heritable & Gen Inv Bk	8½	Yorkshire Bank	8½
Brit Bk of Mid East	8½	● Hill Samuel	§8½		
● Brown Shipley	8½	C. Hoare & Co.	8½		
Business Mtge Tst	9	Hongkong & Shangh	8½		
CL Bank Nederland	8½	Lloyds Bank	8½		
Central Capital	8½	Meghraj Bank Ltd	8½		
● Charterhouse Bank	8½	Midland Bank	8½		
		● Morgan Grenfell	8½		
		Mount Bnkg Corp.	8½		

● Members of the Accepting Houses Committee. * 7 day deposits 3.50% Savewise 6.36%. Top Tier-£2,500+ at 3 months' notice 7.81%. At call when £10,000+ remains deposited. ‡ Mortgage base rate. § Demand deposit 3.50%. Mortgage 9.625% - 10%

FT CROSSWORD No.6,589

SET BY GRIFFIN

ACROSS

1 Nurse requires suit in a certain colour (3-5)
6 Coloured ring on cooker (6)
9 Hide from prisoner during terrible scene (8)
10 Keeping French wine in sink (6)
12 *Horrible experience might* turn into near disaster (9)
13 May get engaged to get things moving (5)
14 Side turning joined around mid-day (4)
16 *Altar cloth moved – not far –* then left (7)
19 Mines, to explode, must be slightly wet (7)
21 When retiring mum needs a girdle! (4)
24 Lout vandalised northern UK airport (6)
25 Joint in old car is unusually poor (9)
27 Iris goes red because of this (6)
28 Doctor Eden, please insert "enrolled" (8)
29 Colour of reverse of stone barrel (6)
30 Write tally in colour (3-5)

DOWN

1 *Colour of princess is rising* (6)
2 Appoint fool to take gin round (6)
3 Perch way beneath Joey (5)
4 "Alice cooked oxtail in it" many cry out (7)
6 Scare into making responses (9)
7 Flavoured with hazelnuts it set one quivering! (8)
8 Incites man with £2 to get colour (8)
11 Complain if buzzer gets loud (4)
15 About sixteen a day in May is great! (9)
17 Paint lions running after bird (8)
18 I'd turn up on stern area (8)
20 Caught family standing around prison (4)
21 Odd way to row (7)
22 Jack stands to lose one title fight (6)
23 Colour possibly ended under back door (6)
26 Due to be wound round on top (5)

Solution to Puzzle No.6,588

COFFER ACCURATE
O R N B L N N N
CHOWDER ADDENDA
K S S I N E O B
SETS PENNYROYAL
U B H F I T E
RAILED ESCAPES
E T L B H K M H
DEBITED PEOPLE
A G W J S I L
METHODICAL FROM
B H L L M A I S
IRELAND MODICUM
T T N E Y Z A A
STANDARD MERLIN

FT UNIT TRUST INFORMATION SERVICE

AUTHORISED UNIT TRUSTS

[illegible]

FT UNIT TRUST INFORMATION SERVICE

Schlesinger Asset Management Ltd
8 Crosby Sq, London EC3A 6AQ 01-588 6993/4/5

Schlesinger Global Gth Acc.	29.8	31.8	-0.1	-
Do. Income	29.7	31.6	-0.2	0.19
Schlesinger European Acc.	21.3	22.7	-0.1	-
Do. Income	21.3	22.7	—	0.11
Schlesinger UK Eq Inc Acc.	36.7	38.7	—	-
Do. Income	34.3	36.2xd	—	5.36
UK Cap Gth Acc.	25.4	26.8	-0.1	0.75
Schlesinger Pac Basin Acc.	30.7	32.7	-0.2	-
Schlesinger Mngd Exempt	142.9	148.9xd	-0.4	-

Scottish Equitable Fund Mgrs. Ltd(z)
28 St Andrews Sq, Edinburgh 031-558 1051

Intnl Income Units	131.3	139.7	-	3.18
Intnl Accum Units	200.9	213.7	-	3.18
U 4 General Acc.	38.6	42.2	-0.2	3.38
UK General Inc.	37.2	39.7	-0.1	3.38
American	27.7	29.5	+0.1	2.13
European	35.0	37.3	-0.4	1.26
Japan	57.8	61.7	-	0.05
Technology	35.0	37.3xd	-0.2	2.29
Performance Trusts				
Far East Perf Tst	19.1	20.4	+0.1	2.00
High Inc Perf Tst Inc.	24.4	26.0	-0.2	5.36
High Inc Perf Tst Acc.	24.0	26.5	-0.2	5.36
Worldwide Tech Perf Tst	28.4	30.4	-0.2	2.71

Scottish Life Investments(z)
19 St Andrew Sq, Edinburgh 031-225 2211

Nelson (UK)	214.5	229.5	-1.0	2.60
Columbus (US)	131.4	140.5	-0.8	1.31
Marco Polo (Pac)	216.8	231.9	—	0.20
Da Vinci (Eur)	224.7	240.4	-1.4	1.59
Drake (Wld)	53.4	57.2	-0.2	2.74

Scottish Mutual Investment Managers Ltd
109 St Vincent St, Glasgow G2 5HN 041-248 6100

UK Equity	207.2	220.5	-0.7	2.53
UK Smllr. Cos. Equity	213.5	227.2	-0.2	1.95

[illegible]

INSURANCES

[illegible]

Continued on next page

FT UNIT TRUST INFORMATION SERVICE

Phoenix Assurance Co Ltd
Phoenix House, Redcliff Hill, Bristol 0272 294941
Life Assurance Funds

Wealth Assur.	385.0	405.3	—	—
Eb'r Ph. Eq.	343.0	362.5	—	—
Pension Plan Funds				
Phoenix				
KK Equity Acc.	168.5	177.3	-0.9	—
International Acc.	128.5	135.2	+0.1	—
Property Acc.	125.5	132.2	—	—
Fixed Interest Acc.	155.6	163.7	+0.7	—
Money Acc.	137.4	144.6	—	—
Bldg. Soc. Link Acc.	134.6	141.6	-0.1	—
Special Mnged. Acc. Q	148.4	156.2	-0.4	—
Phoenix/Framlington				
Intnl. Growth Acc.	89.2	93.8	-0.7	—
Amer. & Gen. Acc.	82.0	86.3	-0.6	—
Capital Tst. Acc.	176.5	185.7	-0.4	—
Japan & Gen Acc.	182.1	191.6	-1.1	—
American Turn. Acc.	85.2	89.6	-0.8	—
Recovery Tst. Acc.	172.1	181.1	-0.8	—
Special Mngd Acc.	144.8	152.4	-0.4	—
Phoenix/GT				
International Acc.	121.6	128.0	-0.5	—
US & General Acc.	89.7	94.4	-0.8	—
Amer Spec Sits Acc.	65.3	68.7	-0.5	—
Japan & General Acc.	176.1	185.3	-0.9	—
Far East & Gen. Acc.	139.3	146.6	-1.0	—
KK Capital Acc.	175.6	184.8	-0.4	—
European Acc.	134.2	141.2	-0.7	—
Special Mngd. Acc.	126.9	133.5	-0.2	—

Pioneer Mutual Insurance Co Ltd
16 Crosby Rd, N. Waterloo, Liverpool 051-928 6655

Managed Fund	267.7	281.8	-1.0	—
Man Pens Inc & Cap Fds	343.0	361.1	-1.7	—
Money Fund	111.7	117.0	+0.1	—
Pens. Mngd Fd (Init)	85.4	89.9	-0.6	—
Pens Mngd Fd (Acc)	96.3	101.4	-0.5	—
Pens FT30 Fd (Init)	129.8	136.7	-0.7	—
Pens FT30 Fd (Acc)	146.4	154.2	-0.7	—
Pens O'seas MgFd(Init)	56.6	59.6	-0.9	—
Pens O'seas MgFd(Acc)	63.8	67.2	+1.0	—
Pens Fxd Int Fd (Init)	105.2	110.8	-0.7	—
Pens Fxd Int Fd (Acc)	118.7	125.0	+0.7	—
Pens Deposit Fd (Init)	101.0	106.4	—	—
Pens Deposit Fd (Acc)	113.9	119.9	+0.2	—

Premium Life Assurance Co Ltd
37-39, Perrymount Road, Haywards Heath 0444 458721

American	87.0	92.0	-1.0	—

Prudential Assurance Co
Holborn Bars, London EC1N 2NH 01-405 9222
Prufund

Managed Mar 23	199.1	207.4	+0.8	—

Prudential Holborn Life Ltd
30 Old Burlington St, London W1X 1LB 01-439 3134

Managed Fd.	441.6	464.9	-0.8	—
Equity Fd.	902.1	949.6	-3.8	—
Intnl. Fd.	307.8	324.0	-1	—
Fixed Int. Fd.	366.4	385.7	+1.5	—
Prop. Fd.	314.3	330.9	—	—
Cash Fd.	235.2	247.6	+0.1	—
Pacific Basin Fd.	179.6	179.6	+0.1	—
North American Fd.	127.8	134.6	+0.1	—
European Fd.	129.2	136.0	-1.5	—
Holborn Balanced Gwth Fd	100.7	106.0	-0.1	—
Holborn Strategic Gwth Fd	99.9	105.2	-0.2	—

Prudential Holborn Pensions Ltd
30 Old Burlington St, London W1X 1LB 01-439 3134

Managed	471.1	495.9	-1.3	—
Equity	675.2	710.8	-3.8	—
Global Equity	196.0	206.9	-1.0	—
Fixed Interest	377.8	397.7	+2.3	—
Property	307.8	324.1	—	—
Cash	138.5	145.8	—	—
Index Linked Gilt	164.4	173.1	+0.5	—
Guaranteed	8.68	—	—	—
International Money	183.2	192.9	-0.1	—
North American Fd.	57.0	60.0	—	—
Japanese Fund	122.6	129.1	+0.3	—
European Fund	68.6	72.3	-0.6	—
Special Situations Fd.	96.8	101.9	-0.8	—
Communications Fund	80.5	84.8	-0.6	—
Smaller Cos Fund	100.3	105.6	—	—

Prudential Pensions Limited
Holborn Bars, London EC1N 2NH 01-405 9222

Discretnry Mar 16	£124.80	128.37	—	—
Equity Fund Mar 16	£135.63	139.71	—	—
Intrnl Fund Mar 16	£20.02	20.68	—	—
Intl Bond Fd Mar 10	£10.60	10.75	—	—
Fixed Int Mar 16	£68.57	69.47	—	—
Index Linked Mar 16	£51.86	52.99	—	—
Property Fund Mar 16	£79.52	84.21	—	—
Cash Fund Mar 16	£18.31%	18.30%	—	—

Pre-Linked Retirement Plan

OFFSHORE AND OVERSEAS

MANAGEMENT SERVICES

FT UNIT TRUST INFORMATION SERVICE

LONDON SHARE SERVICE

BRITISH FUNDS

1987/88 High	Low	Stock	Price £	+ or –	Yield Int.	Red.
		"Shorts" (Lives up to Five Years)				
102	99	Exch 10½pc '88	100	.....	10.48	8.56
101	98	Treas 9¾pc Cv '88	100	.....	9.73	8.47
98	93	Transport 3pc '78-88	98	.....	3.03	6.61
101	98	Treas. 9½pc '88	100		9.45	8.55
105	101	Treas 11½pc 1989	102		11.23	8.66
102	97	Treas 9½pc Cnv 1989	100		9.41	8.58
96	89	Treas 3pc 1989	96		3.12	6.58
104	99	Treas 10½pc 1989	102		10.30	8.73
103	98	Exch 10pc 1989	101	.....	9.85	8.75
105	100	Exch 11pc 1989	103		10.67	8.71
96	89	Treas 5pc 1986-89	96		5.20	7.58
108	99	Exch 10¼pcCv '89	103		9.87	7.65
111	104	Treas 13pc 1990‡‡	106		12.16	8.76
106	100	Exch 11pc 1990‡‡	103		10.61	8.79
118	103	Exch. 12½pc 1990	106		11.73	8.85
92	84	Treas. 3pc 1990	92		3.25	6.89
100	93	Treas 8¼pc 1987-90‡‡	99		8.39	8.74
102	98	Treas. 8pc Cv 1990	103		7.91	7.46
105	97	Treas. 10pcCv 1990	102		9.75	8.86
91	81	Exch 2½pc 1990	89		2.78	6.71
118	102	Treas 11¾pc 1991	106		10.99	8.89
95	87	Funding 5¾pc '87-91‡‡	94		6.13	8.07
90	80	Treas. 3pc 1991	88		3.38	7.06
110	98	Treas 10pc Cv '91 ‡‡	104		9.59	8.47
109	101	Exch. 11pc 1991	106		10.34	8.90
99	91	Treas. 8pc 1991	97		8.22	8.85
116	107	Treas 12¾pc 1992‡‡	112		11.39	8.97
106	97	Treas 10pc 1992	103		9.67	8.95
99	90	Treas. 8pc 1992 ‡‡	97		8.24	8.87
108	99	Treas 10½pc Cv 1992‡‡	105		10.00	9.01
86	79	Treas. 3pc 1992	85		3.52	7.14
115	105	Exch. 12¼pc '92	111	.....	11.00	9.06
121	110	Exch 13½pc 1992	115	.....	11.64	9.09
		Five to Fifteen Years				
107	97	Treas 10pc 1993‡‡	103		[illegible]	9.86
118	107	Treas 12½pc 1993‡‡	113	.....	10.[illegible]	9.12
95	82	Funding 6pc 1993‡‡	91	.....	[illegible]	7.94
125	113	Treas 13¾pc 1993‡‡	129		[illegible]	9.23
50	50	Treas 8½pc 1994 (50pd)	50		8.[illegible]	9.16
129	117	Treas 14½pc 1994‡‡	123		11.[illegible]	9.19
124	112	Exch 13½pc 1994	119		[illegible]	9.28
107	97	Treas. 10pc Ln. 1994‡‡	103		9.[illegible]	9.12
120	106	Exch. 12½pc 1994	115		[illegible]	9.28
103	92	Treas 9pc 1994‡‡	99	.....	[illegible]	9.05
118	105	Treas 12pc 1995	113		10.[illegible]	9.29
84	76	Exch 3pc Gas 90-95	82	.....	[illegible]	6.14
109	97	Exch. 10¼pc 1995	105		9.[illegible]	9.22
123	110	Treas 12¾pc 1995‡‡	115		10.77	9.32
130	116	Treas. 14pc '96	124		11.29	9.46
102	92	Treas. 9pc 1992-96‡‡	99		8.99	8.96
139	123	Treas 15¼pc 1996‡‡	132		11.52	9.44
127	113	Exch 13¼pc 1996‡‡	121		10.88	9.35
89	81	Redemption 3pc 1986-96	85		3.53	3.20
108	95	Conversion 10pc 1996	104		9.62	9.31
128	113	Treas 13¼pc 1997‡‡	122		10.81	9.42
111	98	Exch 10½pc 1997	106		9.85	9.37
101	88	Treas 8¾pc 1997‡‡	97		9.03	9.23
98	92	Tr 8¾pc Ln "C" 1997	97		9.03	9.24
140	123	Exch 15pc 1997	133		11.25	9.60
106	93	Exch. 9¾pc 1998	102		9.52	9.37
88	78	Treas 6¾pc 1995-98‡‡	85		7.90	8.95
145	128	Treas. 15½pc '98‡‡	138		11.19	9.60
122	107	Exch. 12pc 1998	116		10.29	9.48
106	92	Treas 9½pc 1999‡‡	102		9.33	9.22
124	109	Exch. 12¼pc 1999	129		10.33	9.48
113	98	Treas. 10½pc 1999	107		9.73	9.34
111	96	Conversion 10¼pc 1999	106		9.64	9.34
100	86	Treas. 8½pc Ln 2000‡‡	95		8.90	9.12
103	89	Conversion 9pc 2000‡‡	98		9.11	9.16
131	114	Treas. 13pc 2000	125		10.38	9.47
110	95	Treas 10pc 2001	105		9.49	9.27
134	118	Treas. 14pc '98-01	128		10.91	9.56
108	93	Conversion 9¾pc 2001	103		9.40	9.25
122	107	Exch. 12pc '99-02	116		[illegible]	9.46
110	96	Conversion 10pc 2002	106		9.[illegible]	9.22
109	94	Treas 9¾pc 2002	104		9.[illegible]	9.22
103	89	Exch. 9pc 2002	98		9.1[illegible]	9.17
		Over Fifteen Years				
136	119	Treas. 13¾pc 2000-03	130		10.55	9.51
111	96	Treas 10pc 2003	106		9.38	9.18
121	105	Treas. 11½pc 2001-04	115		9.92	9.34
111	96	Treas. 10pc 2004	107		9.35	9.16
59	51	Funding 3½pc '99-04	58		6.00	8.16
107	92	Conversion 9½pc 2004	103		9.20	9.12
107	92	Conversion 9½pc 2005	103		9.19	9.10
116	101	Exch. 10½pc 2005	112		9.38	9.11
132	115	Treas. 12½pc 2003-05	126		9.86	9.23
94	81	Treas. 8pc 2002-06‡‡	90		8.81	9.03
110	95	Conversion 9¾pc 2006	105		9.24	9.12
126	108	Treas. 11¾pc 2003-07	120		9.79	9.23

BRITISH FUNDS—Contd

1987/88 High	Low	Stock	Price £	+ or –	Yield Int.	Red.
94	81	Treas 8pc 2009	91		8.78	8.93
101	89	Conv 9pc Ln 2011	100		8.98	8.97
69	59	Treas. 5½pc 2008-12‡‡	67		8.19	8.78
91	79	Treas. 7¾pc 2012-15‡‡	88		8.79	8.91
134	116	Exch. 12pc '13-'17	129		9.29	9.05
		Undated				
45	39	Consols 4pc	44		9.05	–
41	34	War Loan 3½pc‡‡	39		8.89	–
52	46	Conv. 3½pc '61 Aft	51		6.85	–
34	29	Treas. 3pc '66 Aft	32		9.14	–
29	24	Consols 2½pc	27	.....	8.97	–
29	24	Treas. 2½pc	27		8.99	–
		Index-Linked			(1)	(2)
119	108	Treas 2pc IL '90(393.9)	118		8.89	2.20
101	93	Do. 2pc '92‡‡ (385.8)	100		2.09	2.70
132	119	Do. 2pc '96(267.9)	132		3.25	3.52
111	96	Do 2½pc '01 (308.8)	109		3.70	3.91
110	94	Do. 2½pc '03(310.7)	107		3.71	3.90
113	94	Do. 2pc '06(274.1)	108		3.77	3.92
108	89	Do. 2½pc '09(310.7)	102		3.76	3.90
113	93	Do. 2½pc '11(294.1)	106		3.76	3.90
95	76	Do. 2½pc '13(351.9)	88		3.72	3.85
103	83	Do. 2½pc '16(322.0)	95		3.68	3.80
101	81	Do. 2½pc '20 (327.3)	93		3.61	3.72
86	68	Do. 2½pc '24 ‡‡(385.3)	79		3.56	3.67

Prospective real redemption rate on projected inflation of (1) 10% and (2) 5%. (b) Figures in parentheses show RPI base month for indexing, ie 8 months prior to issue. RPI for June 1987: 101.9 and for January 1988: 103.3 (rebased at 100 January 1987 conversion factor 3.945).

INT. BANK AND O'SEAS GOVT STERLING ISSUES

1987/88 High	Low	Stock	Price £	+ or –	Yield Int.	Red.
113	97	African Dv Bk 11½ Ln 2010	107		10.37	10.27
109	93	Asian Dev Bk 10¼pcLn2009	103		9.91	9.85
136	117	Australia 13½pc 2010	128		10.49	10.20
118	100	Do. 11¾pcLn2015	111		10.17	10.09
115	99	Euro Inv Bk 11pc Ln 2002	109		10.07	9.70
110	94	Do. 10¼pc2004	104		9.89	9.76

CORPORATION LOANS

COMMONWEALTH & AFRICAN LOANS

LOANS

Building Societies

Public Board and Ind.

Financial

FOREIGN BONDS & RAILS

AMERICANS

Continued on next page

Money Market Trust Funds

Money Market Bank Accounts

UNIT TRUST NOTES

AMERICANS—Contd

1987/88 High	Low	Stock	Price $	+ or –	Div Gross	C'vr	Y'ld Gr's
44⅞	21⅛	Sun Co. Inc. $1	31⅞	–⅛	$3.00	–	5.2
42¼	22¼	TRW Inc. 62½c	27⅞	–⅛	$1.60	–	3.1
37¾	21	Tenneco $5	25	–⅛	$3.04	–	7.0
220	149½	Do. 10pcLn Stk. 91-5	155		10%	–	14.7
29⅝	15¾	Texaco $6.25	24⅞	+⅛	$3.00	–	6.6
74⅞	36⅞	Time Inc. $1	38½	+⅛	$1.00	–	1.1
30¼	15	Transamerica $1	19½	+⅛	$1.84	–	5.2
14⅛	1⅛	Transworld Corp $5	10	+⅛	20c	–	1.1
27⅛	12⅛	TRINOVA Corp	18⅛	–⅛	56c	–	1.7
24⅞	12⅛	USX $1	17	–⅛	$1.20	–	3.9
37¾	16¼	Utd. Technologies	22⅞	+⅛	[illegible]	–	3.4
38⅝	25¾	US West	28⅞		[illegible]	–	6.2
30½	17⅛	Waste Management $1	29⅛	+⅛	[illegible]	–	1.0
31⅜	11⅝	Whirlpool $1	18⅞	+⅛	–	–	–
37⅛	16⅛	Woolworth $3½	26⅛	+⅝	[illegible]	–	2.8

CANADIANS

1987/88 High	Low	Stock	Price	+ or –	Div Gross	C'vr	Y'ld Gr's
691p	213½p	ABM Gold Corp	224½p	+11	–	–	–
32p	10p	Abbot Energy Corp.	25¼		–	–	–
18⅛	506p	Amer. Barrick Res.	11½		–	–	–
141p	3½p	American Lightwave	4p		–	–	–
122p	25p	Armeno	29¾		–	–	–
117p	39¾p	Augmitto Explo	53⅞	+1½	–	–	–
19⅛	10⅛	Bk. Montreal	12	+⅛	$2.00	–	7.4
10½	488p	Bk. Nova Scot.	500p	–1	72c	–	5.5
20⅝	15	BCE	16⅞		$2.44	–	6.4
10⅛	511p	Bow Valley	591p	–1	40c	–	3.0

BANKS, HP & LEASING

Hire Purchase, Leasing, etc.

BEERS, WINES & SPIRITS

BUILDING, TIMBER, ROADS

BUILDING, TIMBER, ROADS—Contd

CHEMICALS, PLASTICS

DRAPERY AND STORES

DRAPERY AND STORES—Contd

ELECTRICALS

ENGINEERING

ENGINEERING—Contd

FOOD, GROCERIES, ETC

HOTELS AND CATERERS

INDUSTRIALS (Miscel.)

INDUSTRIALS (Miscel.)—Contd

INSURANCES

LONDON SHARE SERVICE

INSURANCES—Contd

1987/88 High	Low	Stock	Price	+ or −	Div Net	C'vr	Y'ld Gr's	P/E
£22¼	£12½	Torchmark $1.00	£16	−⅛	Q$1.00	—	3.4	—
410	235	Trade Indemnity	385	+10	5.6	—	2.0	—
£34	£17¼	Travelers $1.25	£29½	−⅞	$2.40	—	6.6	—
£30¼	£15¾	USF & G Corp $2.50	£27½	−⅛	Q$2.64	—	8.2	—
£33¾	£15¾	USLIFE Corp. $1.0	£20	−⅛	Q$2.28	3.2	3.5	8.9
738	495	Wtd Friendly 0 10p	555		21.0	—	5.2	—
464	192	Willis Faber 12½p	218	−2	†10.75	2.4	7.0	8.0
128	41	Windsor Secs. 10p	61		0.8	◆	1.8	◆

LEISURE

1987/88 High	Low	Stock	Price	+ or −	Div Net	C'vr	Y'ld Gr's	P/E
35½	9	A & M Group 10p	9	−1	—	—	—	—
242	77	[illegible] 10p	106		L45.4	1.6	7.2	12.3
*549	253	Anglia TV	405		14.5	◆	4.9	◆
141	62	[illegible] 1p	91		0.5	6.7	0.8	25.7
72	37	BCE Hldgs 5p	39	+2	L41.0	2.7	3.5	14.5
300	132	[illegible] & W.A.T. 'A'	235		18.0	1.4	4.7	19.1
79	20	[illegible] Media	23		—	—	—	—
235	165	[illegible] & Hawkes	211		—	—	—	—
83	28	[illegible] T.V.	41		†1.4	2.4	4.7	11.9
*439	43½	[illegible] Walker 10p	375	−5	10.5	2.2	3.6	18.1
124	79	Do Cnv. Cr. Cm. Rd. Pf.	110	−1	6.0	—	7.5	—
*338	110	[illegible] Int. 20p	299	+10	6.5	◆	3.0	◆
306	152	[illegible] Comms. 5p	200		L7.0	2.0	4.9	14.0
211	127	Capital Radio 10p	188		6.0	2.7	4.4	11.6
684	370	Central ITV	525		†17.0	2.3	4.4	13.6
274	111	Chrysalis	123	−2	7.0	1.9	7.8	9.1
101	33	Chrysvision 5p	67	+1	0.5	◆	1.0	◆
*68	12	Entertain Prod 5p	16½		—	—	—	—
443	205	Fairline Boats 10p	390	−5	9.0	4.7	3.2	9.2
172½	103½	First Leisure	147	−1	2.34	3.2	2.2	19.5
132½	39	Grampian TVA 10p	49		2.3	3.4	6.4	6.3
78	26	Greenwich Comm	31		—	—	—	—
391	202	HTV Ord.	233xd		†9.8	3.8	3.8	6.3
89	42	Hanimex A$0.25	60		105c	—	4.7	—

MOTORS, AIRCRAFT TRADES

Commercial Vehicles

Components

Garages and Distributors

NEWSPAPERS, PUBLISHERS

PAPER, PRINTING, ADVERTISING

PAPER, PRINTING, ADVERTISING — Contd

PROPERTY

SHIPPING

SHOES AND LEATHER

SOUTH AFRICANS

TEXTILES

TEXTILES—Contd

TOBACCOS

TRUSTS, FINANCE, LAND

Investment Trusts

TRUSTS, FINANCE, LAND—Contd

Finance, Land, etc

OIL AND GAS

OIL AND GAS—Contd

OVERSEAS TRADERS

PLANTATIONS

Rubbers, Palm Oil

Teas

MINES

Central Rand

Eastern Rand

Far West Rand

O.F.S.

Diamond and Platinum

Central African

Finance

Australians

MINES—Contd

Tins

Miscellaneous

THIRD MARKET

NOTES

REGIONAL & IRISH STOCKS

The following is a selection of Regional and Irish stocks, the latter being quoted in Irish currency.

IRISH

TRADITIONAL OPTIONS

3-month call rates

A selection of Options traded is given on the London Stock Exchange Report Page

Account Dealing Dates			
*First Dealings	Option Declarations	Last Dealings	Account Day
Mar 7	Mar 17	Mar 18	Mar 28
Mar 21	Apl 7	Apl 8	Apl 18
Apl 11	Apl 21	Apl 22	May 3

*New time dealings may take place from 9.00 am two business days earlier.

Strong pound helps Gilt – edged issues but restrains interest in exporting stocks

A RENEWAL OF the upward pressures on sterling was a major worry for exporting stocks and UK equity markets as a whole yesterday. Another rise against the D-Mark swept the rate to a twenty-month high of 3.105 despite intervention by the Bank of England – the authorities sold sterling when the rate threatened 3.11 during the morning but decided against any further action.

The pound also improved on the dollar, posing further problems for investors still seeking guidance from the major institutions on the short-term trend. The currency dilemma is the main cause of the present market uncertainty, placing a restraint on both equity and bond trading.

Citicorp Scrimgeour Vickers, the securities house, summed up the situation thus: "Too high an exchange rate would threaten the trade figures just as much as too low an exchange rate would threaten the inflation figures. The Treasury's strict adherence to a compromise level for sterling thus looks set to continue, implying volatile base rates (both downwards and, it needs to be remembered, upwards)".

Despite the nervous backdrop, selective interest was aroused following a heavier-than-usual flow of trading statements, some from sector leaders. BAT Industries pleased with annual profits matching the highest expectations, but those of Woolworth seemed to disappoint analysts. The overall volume of business in equities rose, helped by the specialised activity, and the number of shares traded increased to 422.8m.

Around mid-session the FT-SE index nursed a fresh loss of 7.3, and appeared likely to extend the fall. Wall Street resumed on a desultory note yesterday but against the odds the tone in London improved and the index regained ground to close 3.2 off at 1832.2.

The Gilt-edged market followed the rising pound, although nervousness over the authorities' intentions on the exchange rate tended to subdue business. Marketmakers thought it unwise to be too widely exposed at present even though the pressures are building for lower interest rates.

Overseas investors also seemed in doubt, and domestic retail trade slowed further awaiting the February trade figures, due to be announced at 11.30 tomorrow. A slightly lower T-bond checked the price advance late and the longs were barely ¼ higher in the final dealings.

The oil sector closed mixed after Rilwanu Lukman, the OPEC president, said at a press conference that a meeting of the OPEC price monitoring committee would be held during the first week of April to discuss ways of stabilising oil prices. Oil prices raced up after the news was announced with May Brent up some 50 cents on the day. Afterhours it was announced that Saudi Arabia had requested an immediate meeting of the price committee.

BP old and new shares were barely changed at 274p and 77p respectively after turnovers of 7.1m and 6.8m shares with oil sector analysts said to be attending a breakfast meeting with BP representatives in London this morning. Dealers reported switching from BP to Shell with the latter closing 6 up at 1068p on volume of 2.7m shares.

Elsewhere, Silkolene Lubricants jumped 20 to 320p after revealing profits up from £0.8m to £2.15m.

BAT Industries' preliminary figures suffered, as expected, from exposure to the dollar and the October market crash. Annual profits were little altered at £1.394bn but they came at the top end of analysts' forecasts and prompted a rise in the shares of 9 to 464p.

Apart from the results, interest is currently centred on the outcome of the company's $4.5bn offer for Farmers Group of the US. Suggestions that BAT could run into difficulties with the US Regulatory Agencies over its move were dismissed yesterday by Mr Patrick Sheehy, the chairman. He also said the group was not at all concerned about its ability to meet the regulatory requirements.

Woolworths' preliminary profits, which at £177m compared with £109.1m, included some £30m worth of profits from sale and leaseback deals and other property gains. They caused some misinterpretation initially but were eventually construed as disappointing. The shares price dropped back to 282p before closing a net 9 off at 285p on turnover of 5.2m.

Most analysts were believed to be sticking to their forecasts for the year to end-January 1989 – James Capel at £175m, UBS Phillips and Drew at £180m, Kleinwort Grieveson at £175m and Warburgs at £175m – but Wood Mackenzie, part of County NatWest, lowered their forecast by £10m to £165m last night. County are believed to be unhappy about Woolworth's level of borrowings, and the performance of the Woolworth name stores.

Barratt Developments, one of the UK's leading housebuilders, announced interim results and the shares immediately came under selling pressure on the disclosure of losses at the peripheral holiday time-share property operations in both the UK and Spain.

The company blamed the deficit on the recent adverse publicity surrounding the time-share industry. Barratt's mid-term profit performance was also deemed mildly disappointing and the shares closed 17 lower on the day at 199p.

The banks sector came in for a bout of sustained support late in the session and closed with modest gains on the day, although turnovers remained a minimal levels. Barclays, turnover 1.5m shares, rose 8 to 493p and Lloyds – a "strong buy" according to Morgan Grenfell in their current Financial Monthly – edged up 3 to 281p.

Midland, where Morgan Grenfell recommend switching to Lloyds, were 4 firmer at 419p.

Trading in life assurances was described as disappointing with investors "selling into rallies" one dealer said. Composites included a firm feature in Trade Indemnity, up 10 to 385p after the preliminary profits rise. General Accident attracted a large buying order and hardened to 910p.

Breweries were enlivened by a flurry of interest in Allied Lyons which advanced to 385p before settling only 6 firmer on the day at 381p. The volume of trade amounted to only 1.8m shares and marketmakers threw cold water on Alan Bond stake building rumours which resurfaced yesterday.

Housebuilders gave ground as sentiment was influenced by the Barratt Development news. Tarmac lost 6 at 255p, while George Wimpey eased 3 to 261p. Countryside came back 9 to 292p and Federated Housing dipped 13 to 286p. Elsewhere in the sector, Breedon edged up 3 to 260p, responding to increased annual profits and details of the acquisition of housebuilding and contracting group, E.C. Rippon, for £5.7m cash; the purchase will partly financed by the issue of new shares.

Investors continued to shy away from ICI amid persisting worries that the current strength of sterling could impair overseas profitability and the shares settled 10 lower at 1040p. Rentokil failed to respond to the good annual results and closed 4 off at 196p.

The action in Woolworth diverted attention from the rest of the stores which tended to drift easier. The excellent figures announced by Burton on Tuesday were well received by analysts but failed to sustain the shares which dipped 3 to 249p —overshadowed by the DTI investigation.

Marks and Spencer hardened 2 to 181p on turnover of 2.8m following the latest moves in the battle between Campean and Macys for control of America's Federated Department Stores which will determine whether M & S acquires the Brooks Bros clothing stores group.

The electronics sector retained its accolade as the market's busiest area. Ferranti kept pride of place as the heaviest traded stock in the sector with 8.8m going through the system compared with Tuesday's 11m. The share price edged further ahead to 89p ahead of the analysts presentation in Manchester last night.

"Apart from support ahead of the analysts meeting there are still persistent rumours of stake —building doing the rounds" said one dealer. GEC, with 8m shares changing hands, were almost as active and slipped 3 to 150p as traders began to get edgy about the possibility of further revelations about the MOD enquiry into Marconi.

Plessey attracted a turnover of more than 6m shares and initially dipped to 158p before rallying to close unchanged on the session at 162p, as stake—building rumours continued to circulate in the market. The company amended its offer for Canadian group Leigh Industries and is scheduled to hold an egm on Friday for shareholders to approve the telecoms merger with GEC.

Cable & Wireless, a poor market earlier in the week, eased to 339p after BZW, the securities house, issued a major review of the group concluding in a "sell" recommendation. NEI lost 6 to 103p despite the 39 per cent preliminary profits rise.

Elsewhere, AB Electronic, due to report interims on March 30, added 15 at 400p.

GKN, unsettled by firmness in the pound against the D-Mark, drifted back to close 6 cheaper at 319p. Elsewhere in the Engineers, Matthew Hall advanced afresh to 147p, up 8, amid continued speculative demand on the back of takeover talk. Manganese Bronze rose 18 to 263p on the announcement of CH Industrials 10.41 per cent holding in the company.

Rowntree, one of the Food sector's old takeover favourites,rose 8 to 481p " on the back of one decent buying order of 300,000 shares at 477p" remarked a leading marketmaker. Nestle, inevitably, were mentioned as possible suitors, and turnover in Rowntree built up to 1.2m shares.

Ranks Hovis McDougall were also in demand and firmed 6 to 329p, while Iceland Frozen Foods gained 5 more to 330p after favourable comment on the results. Kwik Save, recent strong performer, ran back 8 to 347p on profit-taking, but Barker and Dobson added a penny to 152p following the preliminary figures. Bernard Matthews shed 7 to 78p after revealing lower full-year profits.

International stocks passed another subdued trading session with prices drifting slightly easier mainly for the want of interest.

Pearson, up 13 at 683p, reflected occasional buying interest ahead of the preliminary figures scheduled to be announced next Monday. Evered improved 7 to 128p, the rise being attributed to a re-rating of the group in view its building products interests. Acquisition news and the proposed placing of shares to raise approximately £20m prompted a reaction of 13 to 235p in Hodgson while GC Flooring and Furnishing, still reflecting the disappointing interim figures, dipped 10 further to 58p. Satisfactory trading stements left Gordon Russell 5 firmer at 275p and Stag Furniture a similar amount dearer at 122p.

Lucas encountered nervous offerings in front of today's interim results and closed 7 lower at 622p. Dowty were also dull and closed 5½ off at 194½p.

WPP, still reflecting the defection of top executives from Lord, Geller, Fredrico, Einstein, came under further selling pressure and fell away to 15 lower at 514p.

Estates Property Investment Company (EPIC), the subject of an unwelcome 260p per share bid from Peachey, closed 3 higher 265p as the group revealed that it is at an advanced stage of discussion with another potential offerer which may lead to higher bid than Peachey's; it was also announced yesterday that London Securities, 3 cheaper at 44p, had sold its 25 per cent stake in EPIC to Peachey at 260p per share realising a £2.1m trading profit for LS. Peachey closed a penny cheaper at 412p. Randsworth Trust firmed 2 to 158p, after 162p, in reply to the excellent interim results, while Town Centre Securities, recently singled out by one securities house as a beneficiary of the Capital Gains Tax changes, jumped 8 to 90p.

P & O, reflecting a favourable response to the preliminary figures, moved ahead further to close 12 higher at 617p for a two-day rise of 28. Some 3.7m shares changed hands yesterday.

Framlington, the fund management group, improved afresh to 199p, up 6, in the wake of its rejection of the takeover offer from Throgmorton Trust.

Traded Option business was moderate, the total number of contracts falling to 21,698. Calls came out at 15,524 with puts at 8,174. Rolls-Royce registered 1,704 calls with much of the business transacted in the April 130's. British Gas calls amounted to 2,072 with puts at 1,050. The FTSE contract attracted 869 calls and 1,407 puts.

The FT-SE Index Steering Committee decided yesterday on four deletions from the Footsie index - Bunzl, Dixons Group, Sedgwick Group and Standard Chartered. The four replacement constituents will be Williams Holdings, Burmah Oil, Blue Arrow and RMC Group. The changes will apply on the first trading day after Easter.

Traditional Options

- First dealings Mar 14
- Last dealings Mar 25
- Last declarations June 16
- For Settlement June 27

For rate indications see end of London Share Service

Dealers reported quieter conditions in the Traditional option market yesterday. Stocks favoured for the call included Wilson (Connolly) Holdings, Ferranti, North Kalgurli, British Petroleum new, Polymark, Astra Holdings, Brunswick, J. Crowther, Dewey Warren, Pentland Industries, London Investment Trust and Owners Abroad. No put options were reported, but doubles were arranged in Irish Distillers and SI Group.

FINANCIAL TIMES STOCK INDICES

	Mar. 23	Mar. 22	Mar. 21	Mar. 18	Mar. 17	Year Ago	1987/88 High	1987/88 Low	Since Compilation High	Since Compilation Low
Government Secs	90.36	90.28	90.14	90.30	90.51	91.56	93.32 (8/5/87)	83.73 (29/10/87)	127.4 (9/1/35)	49.18 (3/1/75)
Fixed Interest	97.72	97.52	97.26	97.49	97.68	97.33	99.12 (15/6/87)	90.23 (2/1/87)	105.4 (28/11/47)	50.53 (3/1/75)
Ordinary §	1459.8	1463.2	1462.7	1476.8	1459.1	1623.0	1926.2 (16/7/87)	1232.0 (9/11/87)	1926.2 (16/7/87)	49.4 (26/6/40)
Gold Mines	244.9	249.0	242.5	240.9	244.2	412.4	497.5 (4/8/87)	234.0 (29/2/88)	734.7 (15/2/83)	43.5 (26/10/71)
Ord. Div. Yield	4.45	4.44	4.44	4.38	4.44	3.64				
Earnings Yld. %(full)	11.32	11.29	11.29	11.18	11.31	8.34				
P/E Ratio (net)(*)	10.77	10.80	10.80	10.91	10.78	14.70				
SEAQ Bargains (5pm)	30,848	31,413	31,458	40,559	31,486	57,282				
Equity Turnover (£m)	-	958.05	915.11	1357.74	1127.39	1587.19				
Equity Bargains	-	37,905	37,922	44,708	35,514	71,695				
Shares Traded (ml)	-	420.1	419.5	600.2	472.0	683.0				

S.E ACTIVITY

Indices	Mar.22	Mar.21
Gilt Edged Bargains	136.2	122.7
Equity Bargains	245.6	245.7
Equity Value	1936.5	1849.7
5-Day average		
Gilt Edged Bargains	138.3	139.7
Equity Bargains	243.2	235.4
Equity Value	2233.5	2209.0

♥ Opening	10 a.m.	11 a.m.	12 p.m.	1 p.m.	2 p.m.	3 p.m.	4 p.m.
1461.3	1460.4	1456.0	1456.4	1455.9	1456.4	1457.3	1459.6

Day's High 1461.4 Day's low 1455.2

Basis 100 Govt. Secs 15/10/26, Fixed Int. 1928, Ordinary 1/7/35, Gold Mines 12/9/55, S E Activity 1974, * Nil=10.66.

LONDON REPORT AND LATEST SHARE INDEX: TEL. 0898 123001

NEW HIGHS AND LOWS FOR 1987/88

NEW HIGHS (19).

CANADIANS (1) Tarn Pure Tech., HOTELS (1) Savoy "A", TRUSTS (1) St. David's Inv. Tst., PLANTATIONS (1) Landu Hldgs., MINES (1) DRX Inc., THIRD MARKET (2) M.L. Laboratories, Video Tape Record.

NEW LOWS (18).

CANADIANS (1) Energex Minerals, BANKS (1) Rothwells, STORES (3) Bedford (Wm), Field (Mrs), Gasner Group, ELECTRICALS (2) Highland EL, Murray Electronics, FOODS (2) BSN, Matthews (B), HOTELS (1) Reliance Sec. Group, LEISURE (1) Prism Leisure, PROPERTY (1) County Props. "B", TRUSTS (1) CDFC Trust 8½pc, OILS (1) Total-Cie Fr. Pet. B, MINES (1) Marievale.

TRADING VOLUME IN MAJOR STOCKS

The following is based on trading volume for Alpha securities dealt through the SEAQ system yesterday until 5 pm.

Stock	Volume 000's	Stock	Volume 000's	Stock	Volume 000's
ASDA Group	1,600	Enterprise Oil	960	Prudential	1,100
Allied-Lyons	1,900	Fisons	496	Racal	2,100
Amstrad	369	General Accident	751	Rank Org.	728
Argyll Group	1,000	General Elect.	8,100	RMC	383
Assoc. Brit. Foods	154	Glaxo	763	RHM	1,800
BAA	3,300	Globe Investment	108	Reckitt & Colman	32
BAT	4,800	Granada	1,300	Redland	523
BET	1,900	Grand Met.	1,100	Reed Intl.	1,700
BICC	71	GUS "A"	40	Reuters "B"	218
BOC	585	Guardian R.E.	15	RTZ	678
BPB Inds.	199	GKN	845	Rolls-Royce	2,300
BTR	1,100	Guinness	751	Rothmans "B"	195
Barclays	1,500	Hammerson	34	Rowntree	1,200
Bass	978	Hanson	2,300	Ryl Bank Scotland	82
Beecham	2,400	Hawker Siddeley	373	Royal Insurance	1,300
Blue Arrow	4,200	Hillsdown Holdings	2,700	STC	1,300
Blue Circle	397	IMI	288	Saatchi & Saatchi	142
Boots	1,100	ICI	1,550	Sainsbury	2,100
Brit. Airways	4,000	Jaguar	1,700	Scott & Newcastle	801
Brit. Aerospace	900	Ladbroke	1,000	Sears	4,500
Brit. & Comml.	369	Land Securities	362	Sedgwick	1,200
British Gas	11,000	Laporte	377	Shell Transport	2,600
BP	7,100	Legal & General	746	Smith & Nephew	1,500
Brit. Telecom	3,100	Lloyds Bank	833	Standard Chart.	146
Bunzl	750	LASMO	1,100	Storehouse	469
Burmah Oil	540	Lonrho	418	Sun Alliance	148
Burton	1,600	Lucas	238	T & N	724
Cable & Wireless	1,600	MEPC	373	TSB	1,000
Cadbury Schweppes	256	Marks & Spencer	2,800	Tarmac	1,200
Coats Viyella	3,300	Maxwell Comm.	674	Tesco	905
Commercial Union	436	Metal Box	1,500	THORN EMI	170
Cons. Gold	606	Midland Bank	529	Trafalgar House	671
Cookson	121	NatWest Bank	973	Trusthouse Forte	471
Courtaulds	1,100	Next	877	Ultramar	927
Dalgety	765	Northern Foods	1,300	Unilever	1,640
Dee Corporation	2,800	Pearson	434	United Biscuits	431
Dixons Group	420	Pearl Group	580	Wellcome	820
English China Clays	353	P & O	3,700	Whitbread "A"	666
		Pilkington	863	Woolworth	5,100
		Plessey	6,900		

RISES AND FALLS YESTERDAY

	Rises	Falls	Same
British Funds	106	2	6
Corporations, Dominion and Foreign Bonds	23	1	27
Industrials	326	507	732
Financial and Properties	129	136	379
Oils	10	40	59
Plantations	3	1	9
Mines	50	62	92
Others	67	74	132
Totals	714	823	1,436

FT – ACTUARIES INDICES

These Indices are the joint compilation of the Financial Times, the Institute of Actuaries and the Faculty of Actuaries

	EQUITY GROUPS & SUB-SECTIONS (Figures in parentheses show number of stocks per section)	Wed Mar 23 1988 Index No.	Day's Change %	Est. Earnings Yield% (Max.)	Gross Div. Yield% (Act at (27%)	Est. P/E Ratio (Net)	xd adj. 1988 to date	Tue Mar 22 Index No.	Mon Mar 21 Index No.	Fri Mar 18 Index No.	Year ago (approx) Index No.
1	CAPITAL GOODS (209)	770.29	-0.6	9.74	3.89	12.89	2.09	774.80	771.79	778.00	880.83
2	Building Materials (30)	1042.92	-0.3	9.53	3.66	13.07	0.85	1045.94	1041.19	1049.17	1085.59
3	Contracting, Construction (34)	1606.36	-1.1	8.86	3.17	14.98	5.62	1623.61	1616.82	1617.79	1493.35
4	Electricals (11)	2059.72	-0.9	10.01	4.92	12.65	1.20	2079.11	2075.43	2088.05	2164.13
5	Electronics (32)	1532.44	-0.6	10.79	3.57	12.09	8.21	1541.60	1531.23	1547.86	1998.00
6	Mechanical Engineering (58)	400.52	-0.3	9.65	4.24	13.06	0.96	401.77	400.78	403.36	406.81
8	Metals and Metal Forming (7)	464.98	-0.8	9.22	3.87	13.00	0.00	468.58	469.19	474.21	472.66
9	Motors (13)	282.17	-0.6	11.21	4.24	10.48	0.71	284.01	283.12	287.80	337.17
10	Other Industrial Materials (24)	1274.58	-0.7	8.90	4.30	13.45	4.58	1284.12	1280.63	1299.50	1488.85
21	CONSUMER GROUP (185)	1075.47	-0.3	8.43	3.50	15.11	2.68	1078.58	1081.96	1089.38	1200.04
22	Brewers and Distillers (21)	1006.39	+0.2	10.19	3.63	12.40	4.24	1004.37	1004.18	1093.86	1107.56
25	Food Manufacturing (23)	842.88	-0.3	9.52	4.05	13.42	2.30	845.46	850.00	858.00	908.65
26	Food Retailing (16)	2127.10	-0.4	7.55	3.00	17.82	7.15	2135.32	2144.77	2156.41	2204.55
27	Health and Household Products (10)	1859.33	-0.5	6.53	2.58	18.12	0.45	1867.77	1873.58	1896.48	2332.32
29	Leisure (31)	1306.25	......	7.52	3.67	17.10	9.10	1306.37	1305.35	1310.60	1287.28
31	Packaging & Paper (16)	512.16	-0.4	8.24	3.65	15.96	0.46	514.00	516.05	518.61	614.96
32	Publishing & Printing (16)	3599.64	-0.2	6.34	4.15	19.80	4.21	3607.06	3616.29	3618.41	3634.53
34	Stores (34)	843.69	-0.4	9.04	5.67	14.03	1.41	846.80	851.76	855.12	1020.59
35	Textiles (18)	578.95	-1.1	11.95	4.32	9.61	0.19	585.46	586.98	586.22	717.08
40	OTHER GROUPS (93)	906.24	-0.3	10.46	4.22	11.91	3.64	908.86	906.34	912.74	994.35
41	Agencies (19)	1191.52	-0.9	6.79	2.21	18.99	4.36	1201.76	1203.60	1219.02	1413.73
42	Chemicals (20)	1035.37	-0.9	11.56	4.76	10.59	18.08	1044.97	1048.01	1048.06	1254.53
43	Conglomerates (14)	1198.35	......	9.54	4.40	12.20	3.14	1198.92	1199.13	1205.18	1278.04
45	Shipping and Transport (12)	1992.59	+0.6	8.53	4.34	15.33	0.00	1980.87	1955.07	1963.36	2003.44
47	Telephone Networks (2)	981.71	-1.0	10.97	4.31	12.14	0.00	991.67	987.43	998.54	1016.07
48	Miscellaneous (26)	1217.48	+1.1	12.54	4.24	9.49	8.54	1203.90	1207.01	1207.16	1358.03
49	INDUSTRIAL GROUP (487)	961.35	-0.4	9.33	3.80	13.51	2.85	964.82	964.56	971.78	1074.06
51	Oil & Gas (13)	1838.26	-0.1	9.53	5.67	13.05	36.27	1840.58	1864.56	1866.43	1871.82
59	500 SHARE INDEX (500)	1035.48	-0.3	9.36	4.07	13.44	5.63	1038.88	1040.57	1047.40	1141.48
61	FINANCIAL GROUP (122)	684.50	......	-	4.80	-	6.76	684.18	685.19	688.20	699.16
62	Banks (8)	672.28	+0.6	22.58	6.06	5.96	15.42	668.20	667.72	673.19	737.64
65	Insurance (Life) (8)	1001.06	-0.3	-	4.96	-	0.80	1003.96	1023.73	1051.34	996.263
66	Insurance (Composite) (7)	531.64	-0.4	-	5.51	-	5.78	533.64	537.94	543.38	538.85
67	Insurance (Brokers) (7)	852.14	-0.5	14.14	7.58	9.01	16.28	856.54	866.47	858.00	1200.17
68	Merchant Banks (11)	356.55	-0.2	-	4.00	-	0.02	357.30	357.67	360.29	385.19
69	Property (51)	1143.90	+0.1	4.78	2.71	26.74	1.23	1142.75	1153.00	1132.29	959.13
70	Other Financial (30)	400.42	-0.2	9.67	4.26	12.99	2.03	401.37	400.82	400.63	459.47
71	Investment Trusts (82)	885.00	-0.2	-	2.95	-	3.71	886.51	887.23	891.36	989.56
81	Mining Finance (2)	465.46	+0.5	9.77	3.70	11.53	2.01	463.25	469.75	472.43	409.12
91	Overseas Traders (8)	1030.71	-0.2	9.95	5.24	11.92	14.64	1033.31	1030.13	1030.02	902.37
99	ALL-SHARE INDEX (714)	941.72	-0.3	-	4.15	-	5.78	944.87	945.70	951.46	1021.72

	Index No.	Day's Change	Day's High	Day's Low	Mar 22	Mar 21	Mar 18	Mar 17	Mar 16	Year ago
FT-SE 100 SHARE INDEX §	1832.2	-3.2	1834.1	1828.1	1835.4	1841.1	1835.5	1828.1	1825.7	2042.9

FIXED INTEREST

	PRICE INDICES	Wed Mar 23	Day's change %	Tue Mar 22	xd adj. today	xd adj. 1988 to date
	British Government					
1	5 years	123.28	+0.12	123.05	-	3.39
2	5-15 years	142.05	+0.20	141.76	-	2.60
3	Over 15 years	150.50	+0.28	150.08	-	4.16
4	Irredeemables	169.06	+0.25	168.63	-	1.54
5	All stocks	138.24	+0.19	137.98	-	3.05
	Index-Linked					
6	5 years	124.72	+0.26	124.40	-	0.51
7	Over 5 years	117.72	+0.14	117.55	-	0.88
8	All stocks	118.13	+0.15	117.96	-	0.85
9	Debentures & Loans	119.73	+0.26	119.42	-	1.78
10	Preference	88.41	-0.18	88.57	-	1.39

	AVERAGE GROSS REDEMPTION YIELDS		Wed Mar 23	Tue Mar 22	Year ago (approx.)
	British Government				
1	Low	5 years	8.58	8.63	8.06
2	Coupons	15 years	9.07	9.09	8.78
3		25 years	8.93	8.95	8.79
4	Medium	5 years	9.24	9.27	8.99
5	Coupons	15 years	9.20	9.23	8.92
6		25 years	9.09	9.11	9.00
7	High	5 years	9.32	9.36	9.02
8	Coupons	15 years	9.38	9.41	9.09
9		25 years	9.13	9.17	8.98
10	Irredeemables		8.91	8.94	8.83
	Index-Linked				
11	Inflation rate 5%	5yrs.	2.52	2.62	2.61
12	Inflation rate 5%	Over 5 yrs.	3.62	3.63	3.57
13	Inflation rate 10%	5yrs.	1.63	1.72	1.49
14	Inflation rate 10%	Over 5 yrs.	3.68	3.68	3.25
15	Debs & Loans	5 years	10.82	10.86	9.57
16		15 years	10.69	10.73	9.87
17		25 years	10.69	10.73	9.91
18	Preference		10.46	10.41	10.65

§Opening Index 1834.1; 10 am 1833.5; 11 am 1829.6; Noon 1829.0; 1 pm 1828.4; 2 pm 1828.4; 3 pm 1829.4; 3.30 pm 1829.7; 4 pm 1831.4

† Flat yield. Highs and lows record, base dates, values and constituent changes are published in Saturday issues. A new list of constituents is available from the Publishers, The Financial Times, Bracken House, Cannon Street, London EC4P 4BY, price 15p, by post 32p.

LONDON TRADED OPTIONS

Option		CALLS			PUTS		
		Apr	Jul	Oct	Apr	Jul	Oct
Allied Lyons (*380)	330	55	63	68	3	7	9
	360	28	38	48	6	17	22
	390	10	22	30	18	30	38
Brit. Airways (*176)	140	37	38	42	1	4	9
	160	19	21	27	3	9	15
	180	5	10	18	10	18	22
[illegible]							

Option		CALLS			PUTS		
		May	Aug	Nov	May	Aug	Nov
LASMO (*332)	300	38	50	62	14	16	25
	330	20	33	45	28	33	37
	360	11	-	-	48	-	-
P. & O. (*617)	550	69	80	95	8	17	28
	600	28	50	60	25	35	45
	650	11	25	37	60	67	75
[illegible]							

March 23 Total Contracts 21,698 Calls 13,524 Puts 8,174

FT-SE Index Calls 869 Puts 1407

*Underlying security price.

LONDON RECENT ISSUES

EQUITIES

Issue Price p	Amount Paid up	Latest Renunc. date	1987/88 High	1987/88 Low	Stock	Closing Price p	+ or -	Net Div.	Times Cov'd	Gross Yield	P.E. Ratio
215	F.P.	8/4	278	218	AMI Healthcare 20p	277		u5.8	2.9	2.5	18.9
§130	F.P.	15/4	166	150	Archer (A.J.) Hldgs 1p	166		R6.5	2.1	5.4	12.4
-	F.P.	-	93	19	Aberdeen Amer Pet. 10p	36	+1	-	-	-	-
‡	F.P.	-	166	150	Barry Starmead	166					
[illegible]											

FIXED INTEREST STOCKS

[illegible]

"RIGHTS" OFFERS

[illegible]

WORLD STOCK MARKETS

AUSTRIA | BELGIUM/LUXEMBOURG | DENMARK | FRANCE | GERMANY | GERMANY (continued) | ITALY | NETHERLANDS | NETHERLANDS (continued) | NORWAY | SPAIN | SWEDEN | SWEDEN (continued) | SWITZERLAND | SOUTH AFRICA | HONG KONG | SINGAPORE | AUSTRALIA | AUSTRALIA (continued) | JAPAN

[illegible]

Sime Darby	2.48	+0.03
Singapore Air	11.50	+0.1
Singapore Press	7.85	-0.05
Straits Trading	3.26	-0.04
Tat Lee Bank	3.04	...
UOB	5.10	...

NOTES – Prices on this page are as quoted on the individual exchanges and are last traded prices. (u) unavailable. § Dealings suspended. xd Ex dividend. xc Ex scrip issue. xr Ex rights. xa Ex all. * Price in Kroner

CANADA

TORONTO
Closing prices March 23

[illegible]

MONTREAL
Closing prices March 23

[illegible]

Total Sales 3,891,263 shares

OVER-THE-COUNTER *Nasdaq national market, closing prices*

Continued from Page 39

[illegible]

INDICES

NEW YORK DOW JONES

	Mar 22	Mar 21	Mar 18	Mar 17	High	Low	Since compilation High	Since compilation Low
Industrials	2066.15	2067.14	2087.37	2086.06	2722.42 (25/8/87)	1738.42 (19/10/87)	2722.42 (25/8/87)	41.22 (2/7/32)
Home Bonds	90.36	90.40	90.58	90.82	95.51	81.26 (9/2/87)	- (19/10/87)	
Transport	892.92	880.08	879.18	876.94	1101.16 (14/8/87)	661.00 (4/12/87)	1101.16 (14/8/87)	12.32 (8/7/32)
Utilities	177.75	178.17	180.71	180.30	227.83 (22/1/87)	160.98 (19/10/87)	227.83 (22/1/87)	10.50 (8/4/32)

●Day's High 2082.89 (2081.23) Low 2052.06 (2050.56)

STANDARD AND POOR'S	Mar 22	Mar 21	Mar 18	Mar 17	High	Low	Since compilation High	Since compilation Low
Composite†	268.84	268.74	271.12	268.65	336.77 (25/8/87)	223.92 (4/12/87)	336.77 (25/8/87)	4.40 (1/6/32)
Industrials	312.02	312.04	314.64	311.39	393.17 (25/8/87)	255.43 (4/12/87)	393.17 (25/8/87)	5.62 (21/6/32)
Financials	23.30	23.32	23.62	23.36	32.43 (25/8/87)	20.39 (7/12/87)	32.43 (25/8/87)	8.64 (1/10/74)
NYSE Composite	151.52	151.47	152.65	151.28	187.99 (25/8/87)	125.91 (4/12/87)	187.99 (25/8/87)	4.46 (25/4/42)
Amex Mkt. Value	299.80	298.10	299.11	297.51	365.01 (13/8/87)	231.90 (4/12/87)	365.01 (13/8/87)	29.31 (9/12/72)
NASDAQ OTC Comp	379.76	375.57	381.58	378.54	455.28 (26/8/87)	291.90 (28/10/87)	455.28 (26/8/87)	54.87 (31/10/72)

	Mar 18	Mar 10	Mar 3	year ago (approx.)
Dow Industrial Div. Yield	3.35	3.54	3.38	2.86
	Mar 16	Mar 9	Mar 2	year ago (approx.)
S & P Industrial div. yield	2.94	2.93	2.96	2.50
S & P P/E ratio	15.35	15.41	15.13	20.82

TRADING ACTIVITY † Volume

Millions	Mar 22	Mar 21	Mar 18
New York	142.000	129.645	248.067
Amex	9.509	9.060	13.880
OTC	121.649	121.871	189.122

NEW YORK	Mar 22	Mar. 21	Mar. 18
Issues Traded	1,966	1,969	1,963
Rises	747	500	699
Falls	732	1,022	824
Unchanged	486	448	440
New Highs	20	16	30
New Lows	8	7	6

CANADA

TORONTO	Mar 22	Mar 21	Mar 18	Mar 17	1987-88 High	1987-88 Low
Metals & Minerals	2752.0	2716.6	2722.8	2726.9	3507.5 (5/10/87)	1988.2 (2/1/87)
Composite	3330.5	3324.1	3322.6	3319.7	4112.9 (13/8/87)	2837.8 (28/10/87)
MONTREAL Portfolio	1655.50	1648.66	1651.47	1656.12	2224.77 (16/7/87)	1435.94 (28/10/87)

	Mar 23	Mar 22	Mar 21	Mar 18	1987-88 High	1987-88 Low
AUSTRALIA All Ordinaries (1/1/80)	1427.1	1420.8	1432.6	1414.0	2305.9 (21/9/87)	1151.0 (11/11/87)
All Mining (1/1/80)	691.4	693.4	694.5	686.1	1462.4 (14/10/87)	532.4 (10/2/88)
AUSTRIA Credit Aktien (30/12/84)	177.43	177.90	178.92	175.83	232.19 (22/9/87)	163.98 (11/2/88)
BELGIUM Brussels SE (1/1/80)	4973.2	4962.4	4953.8	4918.6	5412.2 (13/8/87)	3503.8 (18/12/87)
DENMARK Copenhagen SE (3/1/83)	(c)	193.60	193.87	194.20	219.76 (27/8/87)	179.60 (20/11/87)
FINLAND Unitas General (1975)	620.6	617.5	613.7	604.1	679.1 (15/10/87)	425.2 (5/1/87)
FRANCE CAC General (31/12/82)	293.1	293.2	298.6	299.2	460.4 (26/3/87)	251.3 (29/1/88)
Ind. Tendance (31/12/87)	105.2	104.6	106.6	108.9	112.3 (25/2/88)	89.7 (29/1/88)
GERMANY FAZ Aktien (31/12/58)	474.14	470.49	472.57	(u)	676.84 (6/1/87)	396.40 (29/1/88)
Commerzbank (1/12/53)	1447.5	1436.7	1444.4	1457.5	2061.1 (17/8/87)	1207.9 (29/1/88)
HONG KONG Hang Seng Bank (31/7/64)	2561.91	2594.6	2602.8	2607.6	3949.73 (1/10/87)	1894.94 (7/12/87)
ITALY Banca Com. Ital. (1972)	523.93	521.70	542.37	545.07	767.34 (30/4/87)	423.91 (9/2/88)
JAPAN ** Nikkei (16/5/49)	25895.23	25842.75	(c)	25966.26	26646.43 (14/10/87)	18544.00 (13/1/87)
Tokyo SE New (4/1/68)	2133.05	2127.40	(c)	2134.89	2258.56 (11/6/87)	1557.46 (13/1/87)
NETHERLANDS ANP-CBS General (1970)	251.7	250.3	252.8	250.6	334.1 (14/8/87)	192.2 (10/11/87)
ANP-CBS Industrial (1970)	206.3	203.6	205.7	204.7	280.6 (11/8/87)	147.5 (10/11/87)
NORWAY Oslo SE (4/1/83)	400.26	394.24	395.56	391.09	592.04 (21/9/87)	307.48 (10/11/87)
SINGAPORE Straits Times Ind. (30/12/66)	961.90	957.80	969.40	959.70	1505.4 (26/8/87)	730.4 (7/12/87)
SOUTH AFRICA JSE Gold (28/9/78)	1273.0	1280.0	1255.0	1243.0	2499.0 (3/8/87)	1112.6 (29/2/88)
JSE Industrial (28/9/78)	1497.0	1487.0	1480.0	1487.0	2266.0 (16/10/87)	1367.0 (11/2/88)
SPAIN Madrid SE (30/12/85)	273.75	271.21	274.30	270.87	325.44 (6/10/87)	214.08 (4/12/87)
SWEDEN Jacobson & P (31/12/56)	2738.3	2720.6	2733.6	2756.7	3267.1 (8/10/87)	2062.5 (10/11/87)
SWITZERLAND Swiss Bank Ind. (31/12/58)	535.1	531.4	534.8	539.5	729.7 (5/10/87)	456.5 (11/11/87)
WORLD M.S. Capital Intl. (1/1/70)	(u)	452.9	454.7	454.0	495.9 (27/8/87)	361.3 (2/1/87)

** Saturday March 19: Japan Nikkei (c) TSE (c)

Base values of all indices are 100 except NYSE All Common – 50, Standard and Poor's – 10, and Toronto Composite and Metals – 1000. Toronto indices based 1975 and Montreal Portfolio 4/1/83. † Excluding bonds. ‡ 400 Industrials plus 40 Utilities, 40 Financials and 20 Transports. (c) Closed. (u) Unavailable.

Base values of all indices are 100 except Brussels SE – 1,000, JSE Gold – 255.7, JSE Industrials – 264.3 and Australia, All Ordinary and Mining – 500. (c) Closed. (u) Unavailable.

NEW YORK ACTIVE STOCKS

Tuesday	Stocks traded	Closing price	Change on day		Stocks traded	Closing price	Change on day
Lucky Stores	5,010,200	46¼	-14½	Upjohn	1,736,900	30	-1
IBM	2,357,300	25	+1	Stop & Shop	1,677,100	42½	-⅛
Nutrition	2,215,200	6⅛	+⅛	USG	1,420,800	38¼	+3⅝
Polaroid	2,191,700	45⅜	+1½	Comp Assoc	1,358,200	28⅛	-⅛
Fed Dept Stores	1,910,400	69¼	-3⅛	Exxon	1,354,000	43⅞	-⅛

CHIEF LONDON PRICE CHANGES YESTERDAY
(Prices in pence unless otherwise indicated)

RISES		
A.B. Electronic	399	+14
BAT Inds.	464	+9
Campari Intl.	299	+10
Hall (M.)	148	+8
Pearson	683	+13
P & O Defd.	617	+12
Rowntree	481	+8
Silkolene	320	+20
Town Centre	90	+8

FALLS		
Barratt Devt.	199	-17
GKN	319	-8
Hodgson	235	-13
Lon. & Manchester	278	-9
Lucas Inds.	622	-7
NEI	102	-7
Tootal	108	-9
UEI	333	-10
WPP	514	-15
Woolworth	265	-9

TOKYO – Most Active Stocks
Wednesday, March 23, 1988

	Stocks Traded	Closing Prices	Change on day
Nippon Steel	273.57m	484	+9
Sumitomo Metal Industries	130.39m	396	+10
Kawasaki Heavy Industries	75.59m	391	+1
Nippon Kokan	67.98m	399	-2
Tokyo Gas	63.90m	1,270	+40
Kobe Steel	56.62m	344	+8
Kawasaki Steel	55.96m	408	-1
Ishikawajima-Harima Heavy Industries	55.89m	954	-16
Mitsubishi Electric	43.54m	730	+4
Toshiba	32.56m	812	+3

NEW YORK STOCK EXCHANGE COMPOSITE CLOSING PRICES

12 Month High	12 Month Low	Stock		Div.	Yld.	P/E	Sls 100s	High	Low	Close Quote	Ch'ge Prev. Close
25⅝	14	AAR	s	.36	1.4	21	179	25¼	24½	25⅛	+⅝
30⅛	31	AFG	s	.16	.5	14	1928	32½	32¼	32⅜	
27	10½	AGS	s			18	111	18⅜	10	18⅜	−¼
10½	4¾	AMCA				20	47⅛	d	4⅝	4⅝	−¼
9	8¼	AM	Intl				373	4¼	4⅛	4¼	
65½	26¾	AMR				14	5939	45⅝	44⅛	44⅝	
12¼	6⅝	ARX				8	28	8¾	8⅝	8¾	+½
73½	40⅛	ASA		8	3.4		575	47¼	46⅝	47	+⅝
22⅝	9½	AVX				15	126	17¾	17½	17¾	
67	40	AbtLab		1.20	2.5	16	7669	49⅝	48¼	48⅝	−⅞
28	15⅝	Abitibi		g			572	20⅛	19⅝	19¾	−¼
16¾	8½	AcmeC		.40	3.2		40	12⅝	12¼	12⅝	+½
16½	6⅞	AcmeE		.32b	4.8	22	32	6¼	6	0	−¼
20	14⅛	AdaEx		3.05e	12.		162	10	16⅞	15⅞	
19⅝	8⅞	AdamMl		.24	1.8	16	136	13	12⅞	13	
24⅞	7½	AMD					1780	12⅛	12½	12¼	−¼
58¾	29¼	AMD	pf	3	8.2		3	36½	36½	36½	
11⅞	4⅝	Adobe				13	168	8	7¾	7⅞	−½
20½	16¼	Adob	pf	1.84	9.9		42	18½	18⅝	18½	+⅛
15	6⅛	Advest		.12a	1.6	8	30	7¾	7½	7⅝	
67⅞	43½	AetnLf		2.76	6.2	6	3866	45	44¼	44¾	−¼
83½	41	AflPub		.40	.0	37	186	64¼	63½	64¼	+⅜
26⅛	13	Ahmans		.88	5.7	0	714	15½	15¼	15⅝	−½
5⅝	1⅜	Aileen					57	2½	2¼	2⅜	−⅛

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Continued on Page 39

NYSE COMPOSITE CLOSING PRICES

Continued from Page 38

12 Month High	Low	Stock	Div.	Yld.	P/E	Sls 100s	High	Low	Close Quote	Ch'ge Prev. Close
74	57	PhbpD pf	3	5.0		261	59½	59	59½	+1½
23¾	16¾	PhilaEl	2.20	11.	8	1673	19¼	19⅛	19¼	+⅛
48	36½	PhE	pfC4.40	11.		z20	39½	39½	39½	−½
13⅜	11	PhE	pfR1.41	12.		27	12⅛	12	12	
12½	9⅞	PhE	pfP1.33	12.		11	11½	11¼	11½	+⅛
13½	9⅜	PhE	pfO1.28	12.		38	11	11	11	−¼
117	105½	PhE	pfM15.25	14.		z110	105½	105½	105½	+1½
17⅝	12⅛	PhilSub	.04	6.0	14	28	15⅝	15½	15⅝	+⅜
124½	77⅛	PhilMr	3.60	3.9	12	4779	93½	92¾	93	
23⅛	12½	Phlpln	.44	2.0	14	591	21⅞	21	21⅞	+⅜
9¼	2⅝	Phlcorp				18	5⅛	5	5	−⅛
14⅝	4¼	Pier 1	.06	.7	11	1071	5½	7⅝	8⅝	+¾

12 Month High	Low	Stock	Div.	Yld.	P/E	Sls 100s	High	Low	Close Quote	Ch'ge Prev. Close
55¾	52⅝	Xerox pf5.45		10.		10	52⅝	52½	52½	−⅛
34⅝	19½	XTRA	.04	2.0	16	34	32½	31¼	32½	+⅝
29½	19½	XTRA pf1.94		6.0		85	28¼	60	28¼	+½
33⅞	17½	Yorkin			16	6065	u42¾	31⅞	42	+10
7¼	2¼	Zapata				2587	3⅝	2⅞	3¾	+⅜
37	13½	Zayre	.40	1.7	11	13209	24	21⅝	24	+2½
16⅞	8¾	Zemex	.40	3.1	10	92	19	12	12¾	+⅛
33⅝	10	ZenithE				367	17½	17¼	17½	
13½	2½	ZenLab				286	2⅞	2¾	2⅞	
24	18½	ZenNtl	.50	3.9	16	137	20⅞	20½	20¾	
20⅜	11⅝	Zero	.36	9.4	15	164	19	14¾	15	−⅛
30¾	16	Zurnin s	.68	2.9	15	102	23¼	22⅞	23⅛	+⅛
10⅝	7⅝	Zweig	1.08e	11.		841	10¼	9⅞	10	+⅛

Sales figures are unofficial. Yearly highs and lows reflect the previous 52 weeks plus the current week, but not the latest trading day. Where a split or stock dividend amounting to 25 per cent or more has been paid, the year's high-low range and dividend are shown for the new stock only. Unless otherwise noted, rates of dividends are annual disbursements based on the latest declaration.

a-dividend also extra(s). b-annual rate of dividend plus stock dividend. c-liquidating dividend. cld-called. d-new yearly low. e-dividend declared or paid in preceding 12 months. g-dividend in Canadian funds, subject to 15% non-residence tax. i-dividend declared after split-up or stock dividend. j-dividend paid this year, omitted, deferred, or no action taken at latest dividend meeting. k-dividend declared or paid this year, an accumulative issue with dividends in arrears. n-new issue in the past 52 weeks. The high-low range begins with the start of trading. nd-next day delivery. P/E-price-earnings ratio. r-dividend declared or paid in preceding 12 months, plus stock dividend. s-stock split. Dividends begin with date of split. sls – sales. t-dividend paid in stock in preceding 12 months, estimated cash value on ex-dividend or ex-distribution date. u-new yearly high. v-trading halted. vi-in bankruptcy or receivership or being reorganised under the Bankruptcy Act, or securities assumed by such companies. wd-distributed. wi-when issued. ww-with warrants. x-ex-dividend or ex-rights. xdis-ex-distribution. xw-without warrants. y-ex-dividend and sales in full. yld-yield. z-sales in full.

AMEX COMPOSITE CLOSING PRICES

Stock	Div.	P/E	Sls 100s	High	Low	Close	Chng
[illegible]							

OVER-THE-COUNTER *Nasdaq national market, closing prices*

Stock	Sales (Hnds)	High	Low	Last	Chng
[illegible]					

Continued on Page 37

AMERICA

Bond weakness pulls equities down slightly

Wall Street

WEAKNESS in bonds and lack of conviction undermined the Wall Street equity market, which drifted aimlessly yesterday, *writes Janet Bush in New York.*

The Dow Jones Industrial Average was in negative territory for the bulk of the session but then perked up again towards the close to end 1.49 points higher at 2,067.64. Activity picked np from the very quiet sessions on Monday and Tuesday hot, with 168m shares changing hands, was still subdued compared with the end of last week when volume was more than 200m shares daily.

The bond market failed to consolidate on its steadier performance on Tuesday and closed around ⅜ lower. The Treasury's benchmark 30-year long bond closed 11/32 lower to yield 8.734 per cent.

Two importent economic releases provided evidence of healthy economic growth in the fourth quarter of 1987 coupled with subdued inflation. The figures had little impact on equities but tended to undermine bonds.

A 0.2 per cent increase in the consumer prices index in February, giving an annual rate of only 2.1 per cent, was in line with expectations. If the bond market were in a more positive frame of mind, these figures could have provided some support.

Real GNP growth was revised upwards for the fourth quarter to 4.8 per cent from 4.5 per cent reported previously. Most market estimates had looked for an upward revision to 4.6 or 4.7 per cent.

The key revisions to the data pnshed consumer spending higher and non-farm inventories lower, suggesting that the economy was genuinely stronger than previously thought.

The equity market's sluggish performance this week has worried a lot of traders who had been looking for s sustained and gradual rally from the post-crash highs reached at the end of last week.

There are two characteristics of current trading which are beginning to undermine confidence in the market's health.

First, the rise in second-tier stocks, which had counterbalanced weakness in blue chips and been hailed as a sign that the market was on the mend, has slowed. Second, the only real interest in the market is in "story" stocks of companies with special announcements to make and those involved in the current explosion in takeover activity.

The weakness of the bond market, which in the course of this year has gradually shifted from hopes of a weak economy and, therefore, lower interest rates to fears of a rise in interest rates to head off higher inflation, has also begun to damage equities.

One long-running takeover battle seems to have ended after the announcement that Black & Decker had dropped its bid for American Standard in return for a $25m payment from Kelso & Co, which last week agreed to acquire American Standard for $2.5bn. American Standard dropped $⅛ to $76⅛, while Black & Decker rose $⅜ to $20⅜.

The battle for Federated Department Stores continues unabated after Campean's announcement of a two-tier offer worth $73 a share which tops the rival bid worth $68 a share by R. H. Macy & Co. Federated rose $⅞ to $69⅞, its highest level this year.

One of the day's most active stocks was CalMat, which surged $13½ to $45⅞ after news that it had received a takeover offer of $40 a share from Brierley Investment.

Grolier, the US publisher and distributor of encyclopaedias, rose $⅛ to $26⅛ after announcing that it had rejected a $21 a share takeover bid from Hachette, the French publisher, and saying that it had made preliminary contact with a number of other possible bidders.

Moore McCormack Resources rose $1⅝ to $38⅞ after it announced details of its recapitalisation plan. The company said it would pay special dividends totalling $24.60 in cash and $6.62 principal amount of debentures for each common share. Southdown, whose bid Moore turned down, was up $2⅞ at $42.

Canada

STRONG COMMODITY prices pushed Toronto stocks broadly higher, with base mstals and golds leading the advance.

The composite index gained 29.34 to 3,359.79 as advances outnumbered declines hy 496 to 334 on moderate turnover of 25.1m.

Stronger nickel prices had an impact on heavily weighted Inco and Falconbridge. Inco gained C$⅞ to C$31⅞ and Falconbridge rose C$1⅞ to C$24⅞. Noranda climbed C$1 to C$24⅞ and Alcan Aluminium rose C$⅞ to C$36⅞.

ASIA

Large-capitals kindle moderate Nikkei rise

Tokyo

AFTERNOON profit-taking took share prices off the day's highs in Tokyo yesterday, but the market closed higher on continued strong demand, especially for large capitals, *writes Shigeo Nishiwaki of Jiji Press.*

The Nikkei everage ended the day moderately higher, up 52.48 at 25,895.23, after resching 25,959.85 mid-morning. The day's low of 25,846.86 came at the start of the session. Volume rose from 1.2bn shares on Tuesday to 1.5bn, with declines leading advances by 509 to 396, and 159 issues unchanged.

Trading centred on large-capitalisation steels, shiphuildings and heavy electricals, with such shares accounting for more than half of the volume of stocks on the 10 most actives list.

Nippon Steel, the most active with 273.6m shares traded, closed Y9 higher et Y484. The issue nearly monopolised buying activity in the afternoon, with Nomura Securities purchasing 99.5m shares.

Sumitomo Metal Industries added Y10 to Y396 and was the second most heavily traded with 130.4m shares changing hands. Kobe Steel rose Y8 to Y344, Mitsubishi Electric went up Y4 to Y730 and Toshiba added Y8 to Y812.

Some stocks related to waterfront redevelopment projects were hit as Nomura Securities switched to selling after heavy buying on Tuesday. Ishikawajima-Harima Heavy Industries lost Y16 to Y954 and Onoda Cement Y2 to Y899. But Tokyo Gas, also considered one of these issues, jumped Y40 to Y1,270 with the fifth largest trading of 63.9m shares.

Many steels and shiphuildings scored new highs during the day leading to investor caution at high price levels. But individual tovestors, non-residents and dealers continued to bny, seeking short-term profits, although institutional investors remained inactive.

Among high-tech issues, NEC closed unchanged at Y2,150 and Sony ended Y40 cbeaper st Y5,250. Matsushita Electric Industrial gained Y20 to Y2,700 on volume of 13.8m shares and Oki Electric rose Y27 to Y870.

Among biotechnologies, Yamanouchi Pharmaceutical put on Y100 to Y4,360, Eisai added Y90 to Y2,810 and Shionogi rose Y20 to Y1,880.

The expansion of private equipment investment helped push Sumitomo Heavy Industries Y30 higher to Y620, Amada Y40 to Y1,340 and Omron Tateisi Electronics Y40 to Y2,410.

Elsewhere, Tokyo Electric chalked up a Y140 increase to Y6,370 and Fuji Electric climbed Y7 to Y696. Nippon Telegraph and Telephone gained Y50,000 at one stage, but finished Y20,000 higher st Y2.44m.

Bond prices rallied, with many dealers buying actively in spite of the uncertain interest rate trend to the US. They believe the yield on the 5.0 per cent government bond due to December 1997 will remain within a range of 4.4 to 4.5 per cent for the immediate future, according to market analysts.

The yield on the barometer 5.0 per cent bond went down to 4.440 per cent from Tuesday's 4.485 per cent.

Investors' demand for some giant-capital issues and blue chips continued on the Osaka Securities Exchange, hut prices sagged in general. The OSE stock average fell 17.41 to 26,039.7 on turnover totalling 267m shares, up 35m.

Nintendo fell Y100 to Y8,900 and Toa Wool Spinning Y70 to Y1,480. But Seiren jumped Y70 to Y760, on the planned resumption of dividend payments.

Australia

STRONG institutional buying of industrials and continued takeover activity took the market higher after a weaker opening caused by profit-taking.

The All Ordinaries index rose 6.2 to 1,427.1, following the previous day's 12-point drop, and the All Industrials index put on 18.5 to 2,300.7.

Buy recommendations from Wall Street brokers sent News Corporation 80 cents higher to A$13.50.

FAI rose 20 cents to A$5.10 as investor Mr Joseph Gutnick confirmed he had sold his stake in the company.

Hints from Industrial Equity's Mr Ron Brierley of improvements to his joint A$825m bid for Bell Resources pushed the target group up 7 cents to A$1.72, while Rheem and its suitor Email both added 10 cents to A$2.60 and A$3.50 respectively.

Hong Kong

RUMOURS that the Hong Kong Association of Banks is going to raise interest rates sharply led to speculative selling and the Hang Seng index ended the day down 32.89 at 2,561.91.

Swire A, which reports 1987 results today, fell 10 cents to HK$17.90 and Jardine Matheson, reporting on Friday, lost 40 cents to HK$11.90. HK-TVB, which reported s profits rise of 30 per cent after the close, dropped 10 cents to HK$13.90.

Singapore

SPECULATIVE buying and bargain hunting helped push share prices marginally higher, with encouragement from gains in Tokyo and the steadier dollar.

The Straits Times Industrial index rose 3.65 to 961.5 to moderate trading dominated by small investors, with institutions staying on the sidelines.

QAF rose 6.5 cents to 52.5 cents, with 4.3m shares traded, on rumours of a takeover bid. UOL fell 10 cents to S$1.37 following news of disappointing results and a proposed rights issue.

EUROPE

Takeover rumours return to fuel general advance

TAKEOVER TALK and a rash of rumours boosted most European bourses yesterday, but West German shares were hit by worries in the car sector, *writes Our Markets Staff.*

FRANKFURT was buoyed in early trading by continued strong demand for VW shares, but ended lower as rumours affecting the car sector led to an afternoon wave of selling. The midday FAZ index was up 3.65 at 474.14.

Rumours buzzing around the bourse said Daimler was to introduce short-time, and there was talk of s heavier US tax on cars with high petrol consumption. Daimler denied the short-time rumours but lost DM20.50, or 3 per cent, to DM668. BMW fell DM6.50 to DM519.50 and Porsche dropped DM14 to DM526.

VW rallied, adding DM4.40 to DM250 amid expectations the Government's sale of its 16 per cent stake in the company would be oversubscribed.

Axel Springer lost DM5 to DM560 on fears that control of the leading West German newspsper gronp may fall into unfriendly hands.

MILAN saw continued volatility as rumours made their way around the market and tovestors avoided taking long positions.

The Banca Commerciale index added 2.23 to 523.93 with share prices improving further in the after market. But sentiment was hit somewhat by the stance of the institutions, which were taking short-term positions only.

"The stabilising influence of the long-term investor is missing from the market," said one analyst.

Montedison rose L35 to L1,450 after news of its restructuring, while its services holding company Iniziativa Meta, which will be incorporated into Ferruzzi Finanzaria, lost L79 to L9,801.

Rumours that Mr Carlo De Benedetti might sell some or all of his stake in Olivetti pushed the office equipment specialist up L364 to L10,765, rising to L11,000 after hours.

State-controlled food group Sme was also surrounded by rumours – varying from reports it may be privatised to suggestions it may make an acquisition – and gained L88, or 3.6 per cent, to L2,448.

PARIS took President Mitterrand's candidacy in its strida despite the uncertainty the issue has created in the market over the past three weeks.

A fresh bout of takeover speculation injected some life into trading to lift the market late in the day so it ended the monthly sccount on s higher note. The Indicateur de Tendance added 0.60 to 105.20.

Cie dn Midi, the insurance group that has been a frequent target of speculation, gained FFr86 to FFr1,352, and its property unit Immeubles de la Plaine Monceau added FFr14 to FFr361.

Mail order house La Redoute, facing a bid from department store chain Printemps, led retailers with a FFr45 rise to FFr2,270.

Recently privatised issues were comforted by Mr Mitterrand's statement that he did not plan renationalisations if elected. CGE rose FFr3.60 to FFr227.10, Havas FFr7 to FFr519 and CCF FFr1.70 to FFr111, but Paribas eased 40 centimes to FFr308.60.

Engineering group Schneider shed FFr1 to FFr254 after its revised offer for 100 per cent of Télémécanique, still suspended.

BRUSSELS was lifted hy another round of takeover speculation which sent shares in retailer Delhaize soaring.

The stock gained BFr430, or 9.4 per cent, to BFr5,000 in extremely heavy trading, a pattern similar to that of retailer GB-Inno which jumped early this month on bid speculation. GB-Inno also saw active buying yesterday and rose BFr30 to BFr1,280.

Takeover target Société Générale, which heard on Tuesday that Mr De Benedetti's French holding company had not managed to acquire a 50 per cent stake, was trading on the cash morket BFr170 higher at BFr8,130.

Générale de Banque, wbich announced an 8.7 per cent profits rise for 1987, lost BFr80 to BFr5,610 and the cash market index closed 10.77 up at 4,973.21.

AMSTERDAM remained buoyant, closing slightly higher amid takeover rumours. The CBS all-share index rose 0.5 to 86.2.

Biotechnology group Gist-Brocades, a rumoured target, rose Fl 1.30 to Fl 35.90 on turnover of 259,666 shares for a two-day advance of Fl 2.80 after predicting better-than-expected 1988 results.

The insurance sector was also firm, with Aegon up Fl 1.20 at Fl 73.50.

Textile grouo Nijverdal-Ten Cate eased 60 cents to Fl 79.40 on news it would huy the European denim operations of Burlington Industries of the US.

STOCKHOLM recovered from early losses and closed slightly higher, helped by speculatioo following the suspension of trading in Skandia and Skandia International.

The two were suspeoded before announcing that they were taking a 25 per cent stake in Norway's Vesta Group.

The Affaersvaerlden general index rose 6.1 to 807.6, with most sectors gaining. Carmaker Volvo B shares added SKr8 to SKr338 after Tuesday's news of its six-year SKr30bn investment programme.

ZURICH remained fairly static to spite of a rise in volume and the Crédit Suisse index gained 2.6 to 460.8.

Hoffmann-La Roche caused the greetest stir, witb its bearer shares gaining SFr21,500 to SFr173,000 in heavy trading amid speculation it will change some of its expensive bearer shares into cheaper registered stock.

Mscbinery mannfecturer Sulzer moved up SFr75 to SFr4,750, denying reports that it had reeched agreement with financier Mr Tito Tettamanti's syndicate, which is looking to buy the company.

London

EXPORTING stocks were hit by renewed upward pressures on sterling and the FT-SE 100 index lost 3.2 to 1,832.2.

Investors continued to shy away from international favourite ICI on fears of the effect of the strong pound on its overseas profitability. Volume rose, helped by selective activity in stocks reporting results.

SOUTH AFRICA

AN ABSENCE of fresh incentives left the Johannesburg market steady, with golds ending mixed as the hullion price dipped towards the close.

In gold issues, Kloof lost 75 cents to R31.50 and Elandsrand dropped 25 cents to R16, while Vaal Reefs gained R2 to R259 and Harmony firmed 25 cents to R23.50.

Japanese overseas sales drive reaps rewards

AGGRESSIVE foreign huying of Japanese equities this year has helped fuel Tokyo's dramatic recovery to pre-crash levels and crowned a sales drive by leading securities houses, *writes Shigeo Nishiwaki of Jiji Press.*

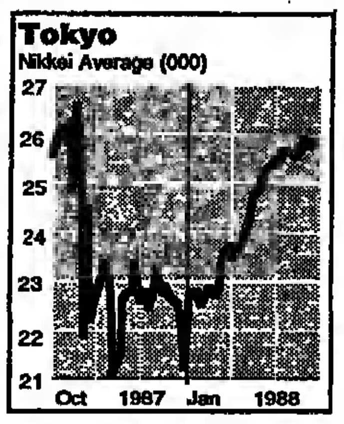
Net foreign purchases on the three major exchanges, Tokyo, Osaka and Nagoya, from January 4 to March 12 totalled Y520.8bn ($4.1bn), compared with net sales of Y67.9bn by domestic financial institutions and net purchases of Y66.1bn by investment trusts.

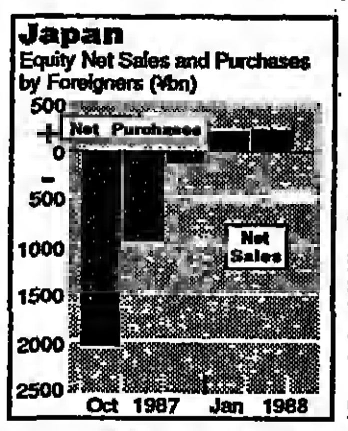
The foreign buying contrasts sharply with last year's, when foreigners sold far more Japanese shares than they bought. Their net sales in 1987 reached a record high of Y7,192.8bn, which was nearly offset by domestic financial institutions' net purchases of Y6,288.9bn.

There was some net selling by foreigners in the first two weeks of this month, but this has turned back into net buying in the past few days, according to the London office of Salomon Bros, the US investment banking and securities firm. It estimates that after last year's net sales of over $50bn, foreigners will make $25bn-$30bn net purchases this year.

Mr Kenji Kobata, deputy general maneger of the equity research department of Nomura Securities in Tokyo, was one of those who took part in the campaign early this year to persuade European institutions to buy Japanese. He said foreign orders had been coming in for stocks such as Kawasaki Steel in lots of 10m shares.

Leading Japanese issues with high liquidity, such as Nippon Kokan, Isbikewajime-Harims Heavy Industries, Sumitomo Chemical, Mitsuhishi Estate, Tokio Marine and Fire Insurance and Sankyu, were especially popular with foreign investors, he added.





Buy orders placed with large securities bouses have come mainly from European pension funds, investment trusts and banks, especially in the UK. Institutional tovestors to Italy, which liberalised controls on investments abroad last year, placed buy orders for Japanese shares early this year for the first time.

Mr Masao Komatsu, executive vice president of Yamaichi Securities, said foreigners had been attracted hy Japan's good economic fundamentals since the glohal stock market crash in October and by Tokyo's lead in the share price recovery.

He said many foreign fund managers now believed they could not significantly improve the performance of their international portfolios without diversifying into Jspanese equities, which account for as much as 42 per cent of the total capitalisation of leading stock markets around the world.

This view is shared by other securities firms. Mr Masayoshi Katsuta, president of Kleinwort Benson Investment Management, said international investment that ignored Japanese shares was unthinkable.

Mr Masazumi Konishi, the director of the equity division of Yamaichi Securities who stayed in Europe and the US until early March as part of the sales drive, said many foreign fund managers were strongly interested in Japanese shares. But, he added, they were concerned sbout the high everage price-earnings ratio of 81.5 for the 225 selected shares represented in the Nikkei stock average. He believed the heavy foreign buying so far this year would not continue.

However, many large securities houses expect the Nikkei average to hit an all-time higb next month on the strength of heavy buying by domestic institutions which follow foreign investors.

FT – ACTUARIES WORLD INDICES

Jnintly compiled by the Financial Times, Goldman, Sachs & Co., and Wood Mackenzie & Co. Ltd., in conjunction with the Institute of Actuaries and the Faculty of Actuaries

NATIONAL AND REGIONAL MARKETS	WEDNESDAY MARCH 23 1988					TUESDAY MARCH 22 1988			DOLLAR INDEX		
Figures in parentheses show number of stocks per grouping	US Dollar Index	Day's Change %	Pound Sterling Index	Local Currency Index	Gross Div. Yield	US Dollar Index	Pound Sterling Index	Local Currency Index	1987/88 High	1987/88 Low	Year ago (approx)
Australia (89)	118.01	+0.8	95.32	105.84	4.02	117.06	94.86	105.34	180.81	85.36	120.14
Austria (16)	92.05	+0.3	74.35	80.87	2.59	91.76	74.36	80.63	102.87	84.35	93.64
Belgium (48)	135.12	–0.1	109.14	118.13	4.05	135.20	109.56	118.36	139.89	94.63	118.13
Canada (126)	123.42	+1.4	99.69	111.13	2.96	121.72	98.64	109.91	141.78	98.15	133.77
Denmark (38)	117.77	+0.2	95.13	103.80	2.77	117.55	95.26	103.80	124.83	98.18	113.09
Finland (23)	124.28	+1.1	100.38	105.93	1.88	122.89	99.59	105.05	–	–	–
France (121)	83.56	+0.6	67.49	75.30	4.23	83.09	67.33	74.98	121.82	72.77	120.42
West Germany (94)	80.58	+0.9	65.09	70.84	2.61	79.90	64.75	70.35	104.93	67.78	87.58
Hong Kong (46)	100.34	–1.0	81.05	100.58	4.26	101.32	82.11	101.54	158.68	73.92	112.08
Ireland (14)	122.04	+0.1	98.57	108.73	4.22	121.88	98.77	108.73	160.22	93.50	130.50
Italy (94)	78.65	+0.3	63.53	73.54	2.62	78.40	63.53	73.31	112.11	62.99	103.09
Japan (457)	167.66	+0.6	135.43	134.39	0.53	166.74	135.12	133.96	167.66	100.00	127.19
Malaysia (36)	121.31	+0.5	97.99	120.24	3.22	120.73	97.83	119.75	193.64	93.76	133.64
Mexico (14)	139.22	–4.3	112.45	347.06	1.02	145.55	117.95	363.24	422.59	90.07	146.47
Netherland (37)	109.72	+0.4	88.63	95.12	4.84	109.29	88.57	94.85	131.41	87.70	112.02
New Zealand (23)	78.55	–0.2	63.45	62.74	5.39	78.74	63.81	63.02	138.99	64.42	97.00
Norway (24)	123.56	+2.3	99.80	106.62	2.85	120.81	97.90	104.58	185.01	95.51	127.09
Singapore (26)	113.57	+0.4	91.73	105.53	2.19	113.08	91.63	105.08	174.28	81.21	122.28
South Africa (61)	135.96	–0.3	109.82	80.32	5.29	136.41	110.54	80.59	198.09	100.00	162.56
Spain (43)	148.89	+1.6	120.26	127.23	3.33	146.53	118.75	125.83	168.81	100.00	110.16
Sweden (32)	118.66	+0.7	95.85	104.74	2.68	117.78	95.45	104.27	136.64	88.50	114.58
Switzerland (53)	84.72	+0.7	68.43	73.40	2.32	84.12	68.17	73.09	111.11	73.65	96.93
United Kingdom (327)	139.27	+0.1	112.50	112.50	4.29	139.17	112.78	112.78	162.87	99.65	132.76
USA (585)	109.62	+0.1	88.54	109.62	3.45	109.56	88.79	109.56	137.42	91.21	123.57
Europe (964)	109.94	+0.4	88.80	93.35	3.76	109.53	88.76	93.23	130.02	92.25	114.25
Pacific Basin (677)	163.08	+0.5	131.72	131.86	0.70	162.21	131.45	131.47	163.08	100.00	126.30
Euro-Pacific (1641)	141.84	+0.5	114.57	116.53	1.65	141.15	114.39	116.25	143.65	100.00	121.50
North America (711)	110.35	+0.1	89.14	109.73	3.42	110.21	89.31	109.60	137.55	91.68	124.11
Europe Ex. UK (637)	91.75	+0.7	74.11	61.34	3.27	91.15	73.87	80.94	111.97	78.89	102.79
Pacific Ex. Japan (220)	107.80	+0.1	87.07	99.71	4.07	107.65	87.24	99.75	164.03	82.92	115.44
World Ex. US (1842)	141.15	+0.5	114.01	116.08	1.73	140.44	113.81	115.77	143.38	100.00	122.40
World Ex. UK (2100)	127.96	+0.4	103.36	113.97	2.08	127.47	103.30	113.69	138.82	100.00	121.91
World Ex. So. Af. (2366)	128.91	+0.4	104.12	114.06	2.27	128.45	104.09	113.84	139.47	100.00	122.61
World Ex. Japan (1970)	110.40	+0.2	89.17	103.35	3.58	110.17	89.28	103.24	134.22	92.98	120.81
The World Index (2427)	128.96	+0.4	104.16	113.82	2.29	128.50	104.13	113.60	139.73	100.00	122.87

Base values: Dec 31, 1986 = 100; Finland: Dec 31, 1987 = 115.037 (US $ Index), 90.791 (Pound Sterling) and 94.94 (Local).

Danish market closed on March 23.
Irish prices were unavailable for this edition.

APPOINTMENTS

Promotions at Allied-Lyons

ALLIED-LYONS has made the following sppointments to its board from April 19; Mr Charles E. Arnett (US), director of J. Lyons & Co., and chairman of Allied-Lyons North America Corporation; Mr David Beatty, senior execntive vice president, operations, of the joint management board of Hiram Walker-Allied Vintners; Mr Derrick Brown, director, and chairman of the grocery and frozen and chilled foods sectors, of J. Lyons & Co.; Mr John A. Giffen (Canadian), an executive vice president of the joint management hoard of Hiram Walker-Allied Vintners, and chairman, Hiram Walker Allied Vintners (Canada); Mr Michael J. Griffiths, director of Allied Breweries, and managing director of Ind Coope; and Mr Donald Marshall, director of Allied Breweries, and managing director of Tetley Walker.

★

CITATION CONSULTING has sppointed Mr Ian Archbell as marketing director. He joins from IBM (UK).

★

CRC SECURITIES has appointed Mr Francis Brereton as investment director, and chairman of CRC Asset Management (Guernsey). He was a director of asset management at EBC Amro.

★

HUNGARIAN INTERNATIONAL BANK has appointed Mr Martin Ashurst as a manager in the forfaitting department. He joins from the Scandinavian Bank, where he was manager in charge of forfaitting operations.

★

Mr Richard Allan has heen appointed director, policy unit, at BRITISH RAILWAYS BOARD from May 16. He is on secondment for two years from the Department of Transport, and succeeds Mr Philip Wood who is returning to the Department.

★

M&G ASSURANCE GROUP has appointed Mr Robert McCrindle and Mr Tony Shearer to the board. Mr McCrindle is a consultant to the British Insurance and Investment Brokers Association. Mr Shearer is finance director of the parent company, M&G Group.

★

Mr Frans ten Boe has been appointed executive director of WACE GROUP, representing the printing division. He was one of the founding directors of Bulls Frieson which the group acquired in April 1986. Since then Bulls Frieson has been merged with Wace's subsidiary Brandprint, with Mr ten Bos as chairman of the combined operation.

★

GKN KWIKFORM has appointed three regional directors: Mr Rick Gilroy (south); Mr Robin Brooks (midlands & south west); and Mr David Wilkinson (north & Scotland).

★

Mr R.E. Gammage has been appointed company secretary of THOMAS ROBERTS (WESTMINSTER) from March 31. He succeeds Mr J.W.T. Saunders, who is retiring.

★

WILLIS CONSULTING has appointed Mr Martin Crossley as non-executive sdviser to the board on Scotland.

★

Mr Richard A. Dalzell has been appointed deputy group finance director of WILLIS FABER from March 28.

★

J.H. MINET & CO has appointed Mr Trevor Anderson as an administration director of the fine arts and jewellery division.

★

DATAQUEST has appointed Mr Philip Daney de Marcillac as director of its newly-formed European computer group. He was European research director with the International Data Corporation.

★

Mr Peter Hunt, director of government and industry affairs for Coca-Cola Northern Europe, has been elected president of THE BRITISH SOFT DRINKS ASSOCIATION. He sncceeds Mr Ian Valder who has become commercial director of the British Waterways Board.

★

J.D. WILLIAMS, mail order subsidiary of N. Brown Group, has appointed Mr Nigel Green as marketing director. He joins from Polaroid (UK) where he was marketing manager. He succeeds Mr Alan Street, who has become administration director, and who wishes to retire next year.

★

Mr Jerry Noble has been appointed general manager group developments and subsidiary companies, BRITISH ISLAND AIRWAYS. He has overall control of Island Sun, and Ticketpoint, he will also be responsible for acquisition strategy. He joins from Southern Air, a helicopter services company.

★

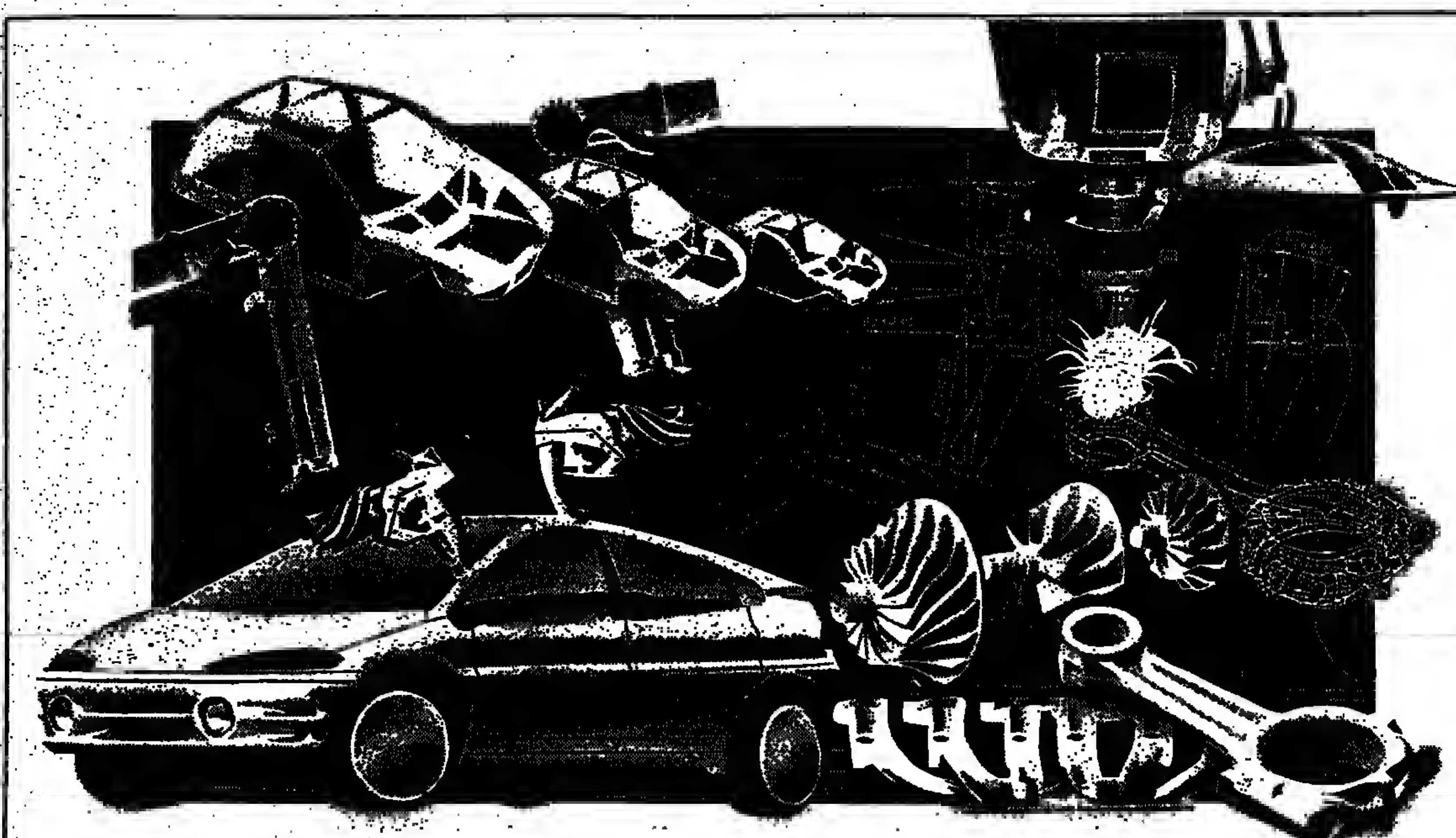
Mr John Murphy, a partner in Bartletts da Raya, is to join THEODORE GODDARD on April 5 as s partner in the corporate department.

SECTION III

FINANCIAL TIMES SURVEY

WORLD MOTOR INDUSTRY SERIES

The impact of converging technologies, electronics, new materials and computerised production techniques is having a profound effect on the motor industry and its suppliers worldwide. It also has far-reaching consequences for drivers, too, as **John Griffiths** explains here



CONTENTS

☐ *Graphics by Bob Hutchison; Illustration, page one, by David Worth.*

The test of intelligence

Towards the Car of the Future

THE planned takeover of the UK's Rover vehicles group by British Aerospace, whatever the detailed arguments about its merits, provides one more example of an accelerating, and now seemingly unstoppable, trend.

This is the convergence of previously disparate industries around new core technologies, embracing mainly electronics but also new materials and the methods of working and assembling them.

No-one would expect to see a jet-powered Rover emerge from such a takeover (even less a Rover-powered jet). Bnt there is now a growing motor industry concensus that the computer-controlled, fly-by-wire jet airliner of the future will have have its counterpart in the computer-controlled, drive-by-wire "intelligent" car of the future, and possibly by the end of the century.

Saab-Scania of Sweden was a pioneer, years ago, in finding synergy between the aerospace and car industries, which the gathering electronic systems revolution has served only to intensify.

More recently, Daimler-Benz of West Germany has acquired the Dornier aerospace and MTU electronics groups. General Motors has spent $7.4bn on acquiring Hughes Aircraft and Electronic Data Systems, while Ford's turnover in the aerospace field – many forget it makes satellites as well as new cars – already exceeds $2bn.

There is plenty of obvious common ground: the systems of sensors, electronic control units and "multiplex" wiring which "actively" control aelerons can equally control suspension, steering and other behavioural aspects of the car.

The jet engine and fuel systems of the fighter share at least the principles of engine and transmission management in the car.

The aerospace industry searches constantly for new materials which are stonger, lighter and cheaper to produce – a quest shared by every car-maker. And, more hesitantly and with a long way still to go, the two industries are groping their way towards common ground, even in the field of manufacturing.

Driven by intense competition, car-makers are chasing hard after highly flexible, computer-integrated manufacturing methods. One objective is to lower yet further the volume threshold at which a single car model becomes viable. Another, assuming increasing importance, is to be able to build, easily, more versions of a model to appeal to the many niches into which new car markets are fragmenting. A third, again driven by competitive pressures, is to reduce model cycle times.

And within this maze of new production technology, the aerospace industry may well find solutions to some of its own problems of how to make complex parts, in relatively much lower volumes, more efficiently and cost effectively.

This pooling of expertise by two major industries which are right on technology's "cutting edge" should produce benefits to each – and ripple out, also beneficially, to other industries.

Electronics are already having a marked impact on the car. It might not yet be intelligent, but there are certain areas where it is beginning to "think" for itself. Examples of these include anti-skid braking and traction control, which prevents the wheels skidding under acceleration.

The latter provides, in one present-day production car, BMW's latest Seven series, a particularly significant portent of things to come. This is because, for the first time, there is no mechanical link between the driver's foot on the accelerator and the engine's response.

If the driver thrusts the accelerator to the floor when grip is inadequate, a computerised interface ignores such fallible human over-enthusiasm. Instead, it orders the engine to accelerate only at a rate which, wheel sensors have told the computer system, *can* be sustained by the tyres.

The ramifications of this aspect of "in-car high-tech" raise some fundamental issues about the car of the future which are a long way from being resolved. The technology is fast becoming available for:

"Active" steering in which, like the BMW's accelerator, the driver's steering wheel conveys, via an electronic control unit, only digital inputs to the steering system itself. Again, over-correction of a skid, for example, could lead to the driver's input being partly ignored.

Collision avoidance, in which infra-red, sonar or radar systems continuously monitor the safe distance to a vehicle ahead and, if necessary, decelerate or even brake the car to preserve it.

Questions then arise, from the vehicle marketing point of view, whether drivers will actually want such systems in their cars of the future. And from a broader viewpoint, inclnding the potential for legislation, there are possible "Big Brother" aspects to the partial removal of control from the driver in pursuit of collision avoidance.

Many of these questions are already being addressed by the pan-European "Prometheus" collaborative research project, being undertaken by 12 European vehicle-makers within the EC's overall Eureka technologies research programme.

Prometheus has identified one major goal of at least halving the number of Western Europe's 50,000 annual road deaths, by the turn of the century.

It hopes to create a safer environment for cars to operate in, as well as cars which are intrinsically more safe to use.

Some of the avenues being explored by Prometheus, however, are uncontroversial and promise both big benefits to road users and the creation of vast new markets for all manner of electronic and other component suppliers. Most notable is an automatic guidance system, linking in-car units with a network of traffic-light mounted information beacons, envisaged eventually for the whole of Europe and possibly beyond. Trials are just beginning in West Germany, the UK and France.

Other sophisticated car electronics yet to come are likely to be seen as unalloyed benefits. "Active" suspension in its proper sense, using two-way hydraulic rams instead of conventional springs and shock absorbers, will lift a car's wheel over a bump, for example, setting new standards of ride and handling.

Vehicle manufacturers, engineering consultancies and all involved in bringing such vehicles into production are not doing it for fun.

As Mr Peter Walzer, head of research at Volkswagen points ont, there are three principal pressures on the car industry taking it ever deeper into high technology. One is that rapidly maturing markets are limiting sales growth, forcing manufacturers to increase value per vehicle. The second comes from legislators seeking to counter some of the adverse impacts of the car, for example through safety and emissions laws.

Finally, observes Dr Walzer, manufacturers must now vie for the attention of "customers, at least in highly industrialised countries, who have more and more of their incomes left over to spend on technically sophisticated luxuries, sometimes sensibly, and sometimes not so sensibly . . ."

Taken together, they represent far-reaching consequences for all involved in making the vehicles or supply their components and production systems.

Precise estimates vary, but it is widely accepted that the electronics content of cars is now on a sharp upwards curve. Dr Walzer, for example, estimates that the level will rise from an average of 6 per cent of the manufacturing cost of a car now to around 24 per cent by 1998.

However, there are already wide variations even within one model of car. A range-topping, fuel-injected, anti-skid braked, four-wheel-drive model can be twice as expensive as the base model.

For the components industry, this is now a serious issue. For it has begun to dawn on the vehicle manufacturers that the lion's share of the value-added content on more up-market models is going not into their own pockets but into those of the high-tech components snppliers such as West Germany's Robert Bosch.

Growth in the variety and absolnte level of demand for advanced components make it certain that those independent component suppliers which innovate in their own right, have a strong design base and are cost-efficient will still be net beneficiaries of the high-technology car evolution.

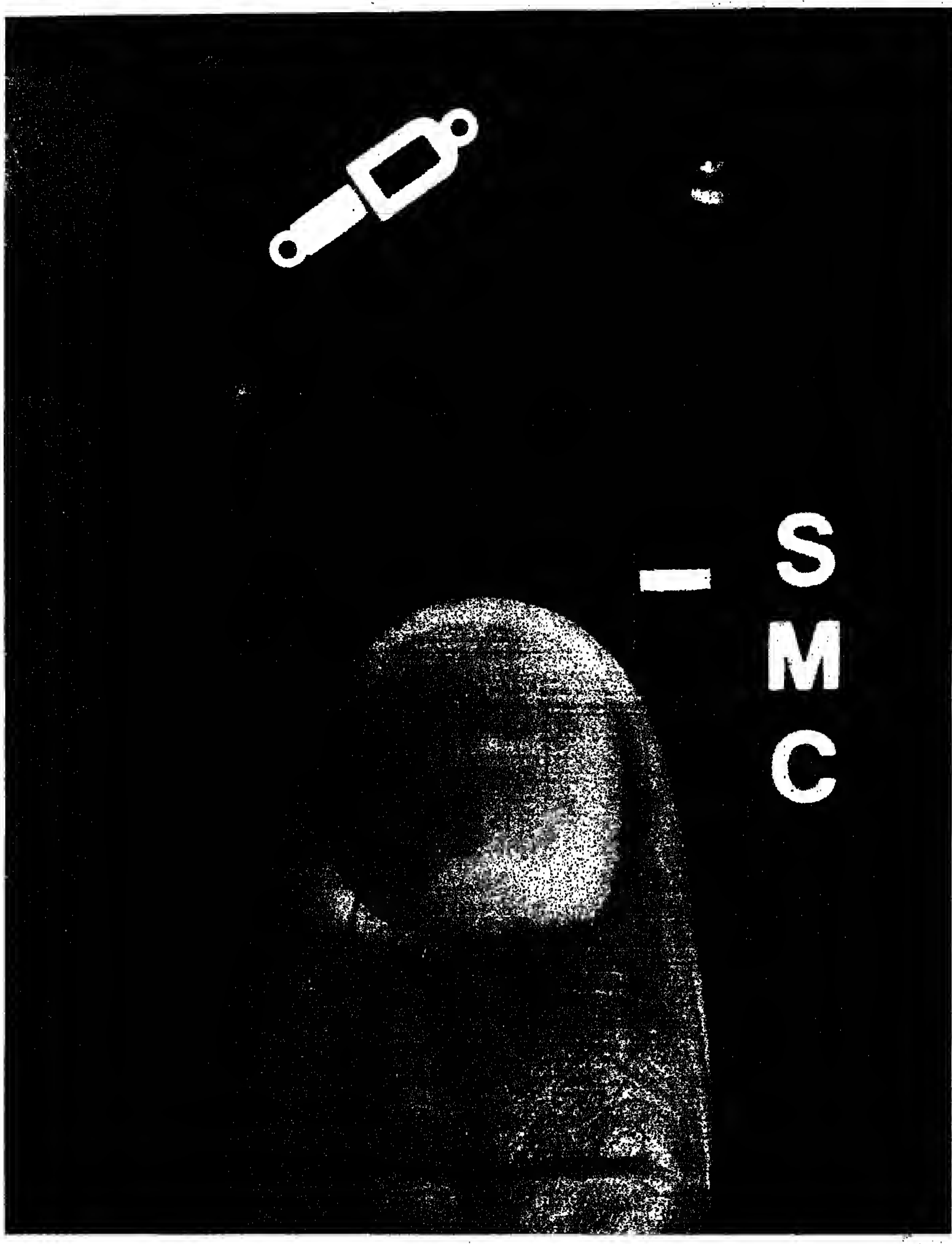
But they still have to face up to the fact that vehicle makers will want a slice of the action by developing and producing more advanced components "in-house" (at which point the aerospace and electronics acquisitions *really* start to make sense).

In turn, this could well mean prized crumbs from the highly industrialised states' table for the less-developed world's component industries, for example through prodncers in high-cost nations making room for the extra high-tech work by farming out more labour-intensive parts.

Yet other factors in this fast-changing kaleidoscope could well work in the independent component industry's favour. For components where long lead times and very heavy capital invest-

Continued on page 12

IF YOU DON'T FANCY THE SUSPENSION YOU CAN ALWAYS CHANGE IT.



You won't need a degree in engineering. All that's required is your finger.

Flick a switch on the dashboard of the new Senator CD and the ride changes.

In the 'Comfort' position it softens.

The suspension relaxes to soak up the bumps and smooth your journey. (Perfect for those patchwork city streets.)

A firmer ride and more positive handling are the virtues of the 'Sports' setting.

And a snaking country lane is the place to fully appreciate it.

The third setting, 'Medium,' is the one you will use for most day-to-day driving.

It gives a ride that is both controlled and comfortable.

A computer oversees the Electronic Ride Control system on the Senator CD.

Every 2.5 milliseconds it checks that all is well.

If it isn't it will try to correct the fault.

And if it can't it will change the ride safely into 'Medium' and warn you on the dashboard.

The computer will also change the ride out of 'Comfort' into 'Medium' if you go over 70mph.

To give you that extra measure of control that a firmer ride bestows.

But then being effortlessly in control is what being in the Senator is all about.

You may never have heard of our unique approach to suspension design, Advanced Chassis Technology.

But you instantly understand what it means when the Senator stays on course as you swerve to avoid a fallen tree.

Then again, you may have read something of ABS braking, standard on the Senator CD.

But it's only when the Senator pulls up in a straight line as a child's ball bounces out in front of you that you realise its true importance.

And Servotronic power steering, doesn't that just make the Senator relaxing to drive?

No, it also makes it safer to drive, because the level of assistance varies progessively according to your speed, so you never lose touch with the road.

From the gearbox with 'Power,' 'Economy' and 'Winter' settings, to the height adjustable seat belts, almost everything about the Senator is designed to accommodate different motoring conditions and different motorists.

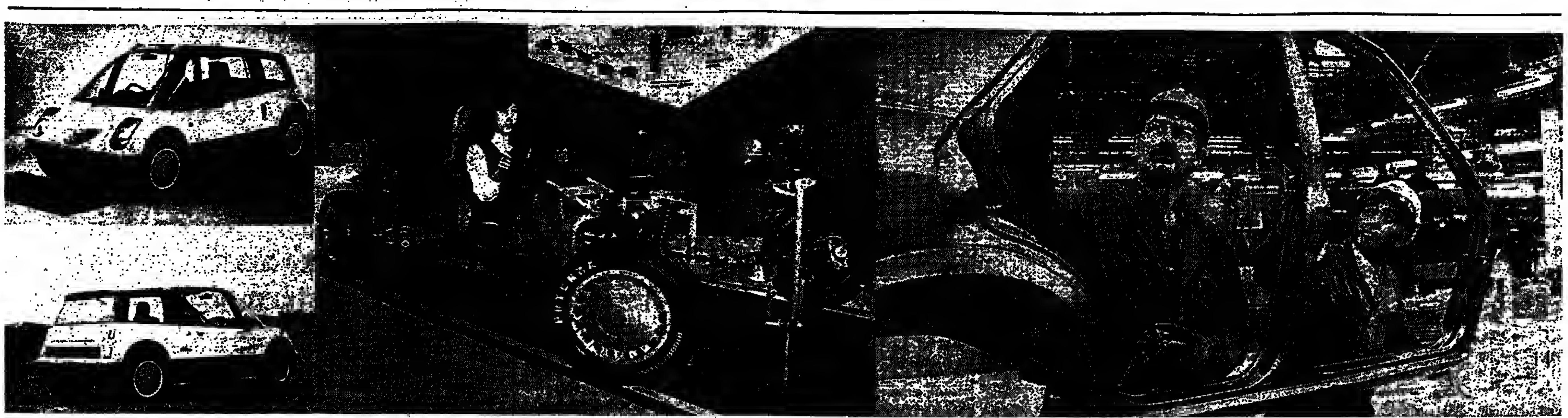
To accommodate different pockets, there's a range of three models, with prices from £15,275 to £20,414.

Your Vauxhall dealer is awaiting your call to arrange a test drive. All that's required is your finger.

THE SENATOR CD.

VAUXHALL. ONCE DRIVEN, FOREVER SMITTEN.

VAUXHALL IS BACKED BY THE WORLDWIDE RESOURCES OF GENERAL MOTORS. FOR FURTHER DETAILS CALL 0800 400 462. ALL PRICES CORRECT AT TIME OF GOING TO PRESS. INCLUDES CAR TAX AND VAT. DELIVERY AND NUMBER PLATES ARE EXTRA. DOT FUEL CONSUMPTION TEST MPG (LITRES 100KM) FOR SENATOR CD 3.0i: CONSTANT 56 MPH 37.1 (7.5); URBAN CYCLE 19.3 (14.6); CONSTANT 75 MPH 29.1 (9.7).



The changing face of Japanese car building . . . *Left*: Daihatsu's Urban Buggy concept car illustrates the industry's willingness to probe new market niches . . . *Centre*: a Honda information girl demonstrates the four-wheel steering linkage, which assists manoeuvrability . . . *Right*: the international approach at Nissan's plant at Washington, Tyne & Wear.

Japanese manufacturers are spending a good deal of money upgrading their cars, combining extravagance with good sense

Affluence has triggered the quest for luxury motoring

ONE THING is already certain about Japan's car of the future: it will cost a lot more than today's Jspanese cars.

The reason is not just the appreciation of the yen. Japanese car-makers are lifting their sights beyond the mid-line, economical car they have become famous for. In order to stay ahead of cheaper models from lesser-developed countries, Japan's car of the future will be more powerful, more luxurious and more expensive than any of its cars so far.

The trend to luxury has already taken root. In January, for example, Toyota's up-market Crown was the best-selling car in the Japanese market, with sales more than double those of the previons year. Nissan's new saloou cars, with 3.2 litre engines, are also selling unusually well.

As the Japanese become more affluent, they are allowing their car-makers to enter an era of creative maturity. Both Nissan and Toyota, for example, are setting up new dealership networks to sell as-yet-unveiled luxury cars in the US market by next year. Althongh Houda has been quicker off the mark, with its Acura line of up-market cars, Nissan and Toyota both insist that they have higher sights than Honda. Japan's two largest car-makers say they have nothing less than Mercedes-Benz, Jaguar and Porsche in their line of vision.

Clues to the new Japanese super-cars were provided at the recent Tokyo Motor Show. Toyota's FXV-11, with a V8, 3.8 litre engine, for example, aims to provide similar power to a Mercedes with a 5.6 litre engine. The engine has a four-cam 32-valve unit, but is relatively small nonetheless. It incorporates such applications of new materials as magnesium fibre-reinforced metal pistons, ceramic exhaust pipes, and ceramic turbine wheels.

These materials, plus a low drag coefficient and the engine's snper turbocharger aystem, according to Toyota, give the car a top speed of 161 mph. And in keeping with the Toyota tradition, the car's designers boast that it consumes less fuel than the European cars it will be competing with.

As car-makers sought to present a luxury image, even Mitsubishi, known for its sporty Colt cars, showed a car called the Debonair Gallant with a hood ornament standing over a gleaming aluminium grill.

The Toyota car also incorporates four-wheel steering and four-wheel drive, now almost standard for Japanese cars. In the electronics department, the FXV sports a 10-inch display unit with infra-red touch switches. In addition to containing a CD player, TV and 8mm video system, it has windshield projection displays for speed and warnings, navigational aids and the car's owner manual.

The panel also allows the driver to use his car telephone without lifting his hands from the wheel. The microphone is built into the steering wheel and the receiver is in the headrest.

Another embryonic Toyota is the AXV-11, with gull-wing doors and rounded, two-seater interior, aimed at the youth market.

Nissan's newest luxury car also combines extravagance with good sense. Its new Cima, recently launched in Japan, is a wide-bodied car with a sleek, expensive look, but containing a new ceramic, turho-charged engine with just three litre displacement. Still, the engine aports up to 255hp, giving it "comfortable reserves of performance", according to the manufacturer.

Nissan claims that the car is strictly for the fast-growing luxury car market in Japan, aimed to compete with BMW and Mercedes-Benz. Its luxury export, it says, will have a four litre or four litre-plus engine. But the Cima gives the general impression of what will be coming down the road from Japan.

"This is a global-design car. Aesthetically, it's spot on – simple, but elegant. It looks coach-built, like a Mercedes, but it's meticulously done," said Mr Richard Singer, a US export consultant for American auto parts companies, who visits Tokyo regularly.

Mr Yasuhiko Misaka, general manager of Nissan's product planning department and one of the Cima's designers, said the car reflected "Japanese sensibilities, which are more delicate than Europeans'". Specifically, he said, the Cima was quieter at lower speeds than German cars and also handled better at lower speeds. The car will sell in Japan at around Y5m ($36,500).

Other car-makers were equally determined to present a lnxury image from Japan. Even Mitsubishi Motors, known for its sporty Colt cars, showed a car called the Debonair Gallant with an MMC hood ornament standing over a gleaming aluminium grill. The new Gallant, priced at Y4.2m, offered leather seats and a three-litre engine.

In addition to other features, the Gallant sports an engine with a double overhead camshaft, four valves per cylinder, two-litre displacement, and 150kw, four wheel independent suspension, which is electronically controlled. It also claims to be the world's first car with needles bearings for the rocker arms.

The Japanese are devoting a great deal of money to the upgrading of their cars. Even Nissan, where profitability is currently under great pressure, is not cutting back on R&D spending. Significantly, Nissan and others are opening design centres in overseas locations. Cars produced in the US or Europe, for example, will he designed increasingly on location, taking into account foreign tastes and passions.

At Honda, for example, spending on R&D has been at the heart of the company's growth. From just 2.3 per cent of sales in 1978, Honda now invests 5 per cent of sales, or more than $1bn, in its R&D annually. Toyota apends about 4 per cent of sales on R&D, or about $2bn a year.

Innovations from other car-makers in Japan include Mazda's proposed modular sports car, which offers the customer a choice of various high-performance plastic panels to be fitted to a lightweight chasis. The car weighs just 850kg, and its acceleration is enhanced by its feather weight, not the strength of its one-litre engine.

Even Japan's smaller manufacturers, like Fuji Heavy Industries (Subaru), Isuzu and Daihatsu, are rolling out sophisticated, ultra-sleek cars for the future. Isuzu, for example, has introduced a new ceramic engine which uses new materials for the intake and exhaust valves, cylinder liners, crankshaft and turbine blades. Daihatsu's futuristic TA-X80 holds a one-litre, double overhead camshaft V6 engine, which has attracted a great deal of attention.

The Japanese look strongest on engine and electronics at this point, with luxury styling still proving elusive. This image of luxury, often held in the eye of the beholder, may prove to be the hardest goal for the Japanese to achieve.

Carla Rapoport

Japan: overseas partnerships

When exporting is less easy foreign friends can help

JAPAN'S MOTOR industry is becoming a true internationalist. With nine manufacturers of cars operating in the home market, car-makers need foreign friends if all are going to survive.

The reasons for this are simple. Japan's nine car-makers face a mature domestic market and a currency that is so strong that exporting is no longer easy. As a result, they are scrambling to cut costs, move production outside Japan and upgrade their product lines. But because of the expected slump in demand worldwide, these goals cannot be achieved quickly enough unless foreign partners are used as much as possible.

Mitsubishi Motors' president, Mr Toyoo Tate, puts it this way: "When I ponder our situation, I recognise we have entered an era of collaboration on vehicles and parts."

MMC has, for example, agreed to sell the Mercedes-Benz line through its dealerships in Japan. It also has strong links with Hyundai in South Korea and Chrysler in the US. MMC and Chrysler are joint venture partners in MMC's Diamond Star plant, currently under construction in the US.

The list of similar links grows almost daily. Some are equity participations, like Ford's stake in Mazda; others are production and design tie-ups, like Honda's deal with the Austin Rover Group of the UK. Some, as in the case of Isuzu and General Motors, represent a lifeline for a weak Japanese company; others represent a swap of, say, new models for marketing strength.

Toyota, Japan's premier car-maker, is forging international links more slowly than some of its smaller rivals. With about 50 per cent of the domestic passenger car market, Toyota has less need than the others.

Although the company has been slower than others in terms of moving facilities offshore, Mr Hiroshi Okuda, director and general manager of overseas planning, says the trend of moving production out of Japan will certainly continue. He points to China, Spain and Brazil as countries that have not yet been fully exploited by Japan. Earlier this year, Toyota signed an agreement with Volkswagen to co-operate in producing a commercial vehicle in Europe.

Nissan is planning joint ventures with Ford to build multi-purpose leisure/commercial vehicles in the US and Spain

But, for the future, partnerships rather than new production facilities are important. The car-maker has ruled out the possibility of building a production facility on its own in Europe, for example. Instead, it is now talking to a variety of European-based auto companies in the hope of finding a partner either to share prodnction facilities or build a new facility.

"We have been approached by European manufacturers with various offers, but we haven't seen any [so far] which could be of mutual benefit," said Mr Tsutomn Ohshima, executive vice president of Toyota, in an interview recently. "But we are still looking for a suitable partner. This is our plan. It would be impossible to go [into Europe] on an individual basis."

Mr Ohshima stressed that the company did not have any specific ideas on the kind of joint-venture it would like to form. However, he did point out that Toyota was trying hard to upgrade its image and move into the luxury class of vehicle sales. As a result, it is believed that a tie-up with one of Europe's luxury car-makers would be very attractive to Toyota if the right deal came along.

Nissan has been much quicker on the international front. In addition to its UK, US and Mexican production plants, it is planning joint ventures with Ford to build multi-purpose leisure/commercial vehicles in the US and Spain. Nissan also has stakes in Iberica Motors in Spain, and tie-ups with Yurung in Taiwan and Daewoo in South Korea.

Nissan, Toyota and Honda, leaders of the Japanese industry, see overseas link-ups as a way to enhance sales and boost profitability in an increasingly tight international market. Smaller Japanese companies, however, see such tie-ups as s way to insure their companies' future. In the case of Mazda and Isuzu, for example, links to foreign companies appear crucial.

Indded, some analysts in Tokyo say that Mazda does not have the corporate strength to remain an independent player in the long term. "I wouldn't be surprised if Mazda ended up as a captive manufacturing affiliate for Ford," says Mr Stephen Marvin, an analyst with Jardine Fleming, the securities company, in Tokyo.

Mazda admits that 60 per cent of the output of its new US plant will go to Ford, under the Ford brand name. It says, however, that the relationship has mutual benefits. (Ford owns 20 per cent of Mazda's shares.) "In the US," says Mazda's new president, Mr Norimasa Furuta, "they can utilise our technolgy and we can use their marketing strength." With some determination, he adds: "Some analysts say we cannot survive . . . bnt we must survive."

Mazda's tie-up with Kia Motors, of South Korea, is another key to a three-leg arrangement. Mazda supplies 60 per cent of the parts and components that Kia uses to prodnce Ford Festivas in South Korea, which are then exported to the US and Canada. Soon, according to Mr Furuta, Mazda will be buying components from Kia, thereby reducing its own costs.

In Isuzu's case, the company is now 41 per cent owned by General Motors. The Japanese companies recently decided to start importing passenger cars from Opel, a GM affiliate in West Germany. As a result, some analysts expect that Isuzu's participation in passenger cars may decline in favour of its commercial and leisure car activities. Sales of its Aska and Piazza cars, known as Impulse in the US, for example, fell by between 15 to 20 per cent last year.

The future for Japanese car-makers, as a result, looks more and more likely to be intertwined with that of the rest of the world's manufacturers.

Carla Rapoport

Japan: direct investment overseas

US favoured as labour costs drive manufacture abroad

IN THE future, Japanese cars will be built in the markets in which they are used. Had Japan suspended all its exports of cars, lorries and motorcycles in 1987, its $96bn trade surplus would have been half that size.

For reasons of politics and economics, the car industry is taking steps in that direction. They are, and will be, most obvious in America.

Half of all Japanese motor vehicles still end up in America. The appreciation of the yen against the dollar since late 1985 has already forced Japanese manufacturers to hike their prices by about 30 per cent (and make deep cost and profit-margin cuts as well).

Investing in America is the best way to hedge against the risk of another deterioration. It is also necessary for growth. The export of passenger cars to America has been capped at 2.3m units since 1981 by "voluntary export restraint" agreements – quotas by any other name.

Last year Japan's car-makers fell shy of that target anyway, and will do so again in 1988. Japan's five main passenger car-makers are all looking to build more cars in America (and more bits of the cars they do) rather than sending them there.

At current exchange rates, Japanese labour is now more expensive than American or West German labour, and other inputs – land, power and steel all cost more, too. So as early as 1990, Japan is expected to be manufacturing about 20 per cent of its cars in America, as many as it now exports there under quota. Honda is already exporting cars from America back to Japan.

Honda is the acknowledged leader in American production. In 1986 it emergered as America's fourth biggest car supplier (after General Motors, Ford and Chrysler). Honda's first American car plant, in Ohio, started production in 1982.

Last year, Honda built and sold 324,000 cars in America, and shipped another 421,000, compared to Toyota's 609,000 cars, all exports. By 1990, the company aims to be making as many cars in America as it exports.

Producing in low-cost America is one reason why Honda's profit margin is higher than that of its rivals. Honda has emulators, too. In February, Nissan announced the completion of the first stage of a joint development agreement with Ford: it is also operating its own $745m independent plant in Tenessee.

Last year Nissan built 117,000 cars in America. Toyota will soon be following suit: it is building a plant in Kentucky at a cost of $1.1bn, another in Canada (cost: C$400m) and has already invested $500m in NUMMI, a California-based joint venture with General Motors.

Producing in low-cost America is one reason why Honda's profit margin is higher than that of its rivals. Now it has emulators

With the local market in mind, all the majors have set up design studios in America. Transplanted Japanese factories are still often derided as "screwdriver plants," with the implication that they are just a way to avoid trade friction and do nothing to support the local economy, even though GM will be distributing 200,000 of the 250,000 cars which the NUMMI facility is meant to turn out.

One way around the protectionists is simply to include more locally-produced components. By 1990, Honda's American operations will be local-sourcing about 65 per cent of the value of each car, barely any lower than the big three American manufacturers manage.

Honda is already building the engines that go into its American-produced cars in America, and the other manufacturers soon will be as well. Engines account for only about 20 per cent of a car's cost, but producing them is the most high valne-added and technologically demanding part of the operation.

Still, the criticisms continue. By 1990, Japanese companies will have added about 2.8m cars to America's annual car capacity (almost twice the total output of Chrysler). This worries a lot of American car-makers. The solution is obvious: the cars will be exported. Thus, Honda is already shipping cars from its plant in Ohio back to Japan. The company plans to be exporting 70,000 cars a year from America by 1991. This is almost twice the American car industry's total exports last year.

Nissan's American arm is due to follow suit. Demand in the Japanese market jumped by 4.7 per cent last year, as measured by the number of units registered. (Truck registrations shot up by 10 per cent). But the major car-makers in Japan are already running their plants at nearly full capacity.

Building new plants in Japan is too expensive, so further expansion in demand is likely to be met, increasingly, by imports. Japanese expansion is not confined to America, though it is most advanced there. Japanese car makers see Europe as increasingly attractive, and direct investment is the only way to proceed. They are already bumping up hard against the EC's 1.36m quota (which may well be cut this year).

Besides a community quota, most countries run their own. In the case of Italy and Spain, the quota is near-enough zero. In Britain, Japanese exports are "voluntarily" limited to 10 per cent of the market: in France, 3 per cent.

Europe's markets are too protected and fragmented for Japan'e carmakers either to make or to sell there nearly as many cars as America absorbs, even though Europe as a whole buys as many cars as America.

Investment presence is limited. Honda has a joint venture with Britain's Austin Rover which turns out jointly-designed cars with both Honda and Austin Rover labels, but it has no capital stake in the venture.

The only Japanese car-maker with a significant manufacturing presence of its own in Europe is Nissan, which has a plant on Britain's Tyneside. Last December, Nissan announced that it will be increasing capacity to 200,000 vehicles a year by the early 1990s.

The economics of car plants is such that only a plant capable of producing about 200,000 cars a year (and costing as mnch as $800m to build) is really viable. Selling that many cars in Europe is almost impossible now, but may become easier.

Asia, which still represents less than 10 per cent of the industry's exports, (though more like 60 per cent of its motorcycle exports) is even harder to deal with; Korea is already a competitor; Thailand, Malaysia and Indonesia soon may be.

Direct investment in all these countries is almost impossible: the car-makers are required to achieve local-content ratios of up to 90 per cent. Majority-ownership of manufacturing firms is generally prohibited, though Malaysia has recently loosened some of its rules in order to attract foreign investment.

Asia, so far, is the exception to a new rule: that the age of exports, in the car industry, is almost over and the age of global production about to begin.

John Woodford
Tokyo

CAR OF THE FUTURE 4

New concepts from GM

Looking to the 21st century

GENERAL MOTORS, battered for the past several years by criticisms of its corporate strategies, model ranges and falling North American market share, sought to strike back in January with what it claimed to be "an unprecedented report to the (US) nation" on model concepts and developments to take it into the 21st century.

It took the form of a three-day exhibition in New York which GM chairman, Mr Roger Smith claimed provided tangible evidence that "GM will maintain its world leadership for years to come".

The exhibition, backed by a $60m advertising campaign, was aimed at convincing its audience that the long list of restructurings, divestitures, joint ventures, cost-saving programmes and acquisitions – including Hughes Aircraft and the EDS electronics group – that has earmarked GM during Mr Smith's chairmanship, are beginning to pay off.

A total of 24 concept and production cars were displayed at what president Mr Robert Stempel described as GM's largest-ever product unveiling. A working design studio from GM's technical centre in Detroit was drafted in as part of the promotional razzmatazz, which launched GM into its 80th year of vehicle-making.

The studio itself was able to demonstrate some of the development concepts being introduced by GM in an attempt to catch up with the shorter lead times of, mainly Japanese, rivals.

General Motors plans an all-out effort to develop new products

Even GM acknowledges that there is a great deal of scepticism to overcome, evidenced by a nine percentage points fall in its US market share over the past two years alone.

Nor has it been helped by the stinging remarks about its management methods by Mr Ross Perot, founder of EDS, whom GM subseqnently bonght ont for $750m last year.

Criticised also for having too many models looking the same, GM it is devoting a record amount of its $8.5bn a year capital spending to new products over the next five years.

The cars incipde the Chevrolet Venture, described as a four-passenger sport saloon for the 1990s. It has an upper structure made entirely of glass and a liquid crystal film darkens the roof panel in direct sunlight. It has a voice-actuated radio.

The Pontiac Banshee 2-plus-2 coupe has some features said to be useable in the next generation of its Firebird range. It uses a tbrougb-the-windscreen "head-up instrument display," television monitor for rear-view traffic and computer memory-setting for driver controls.

The Buick Lucerne is conceived as an up-market urban car with electronic automatic transmission and silent linear-induction motors for starting.

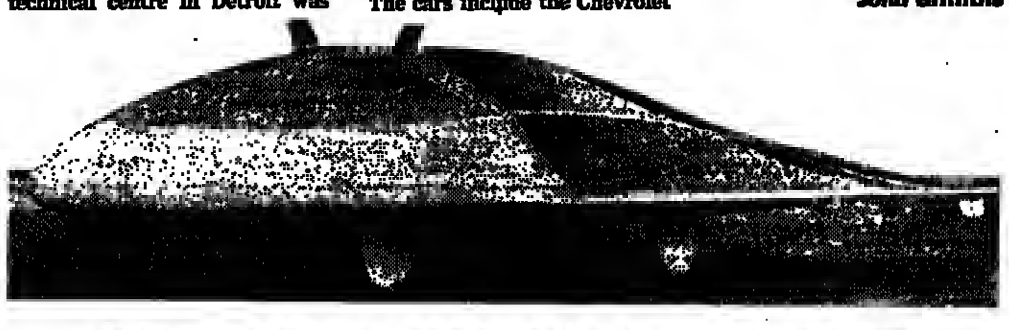
The Cadillac Voyage is more or less a rolling laboratory to evaluate advances in technology, including remote-controlled door actuators.

A peculiarly North American phenomenon, the pick-up truck equipped to luxury car specification, was displayed as the GMC Truck Centaur.

The Oldsmobile Aerotech, developed in part by the UK racing car company, March, and essentially a high-speed test bed for a new engine, the Quad 4.

And the GM Sunraycer, an exotic lightweight vehicle with not the slightest prospect of production, but the solar power panels of which took it to victory in the 1,950-mile trans-Australia World Solar Challenge race last November at an average speed of over 40 miles per hour.

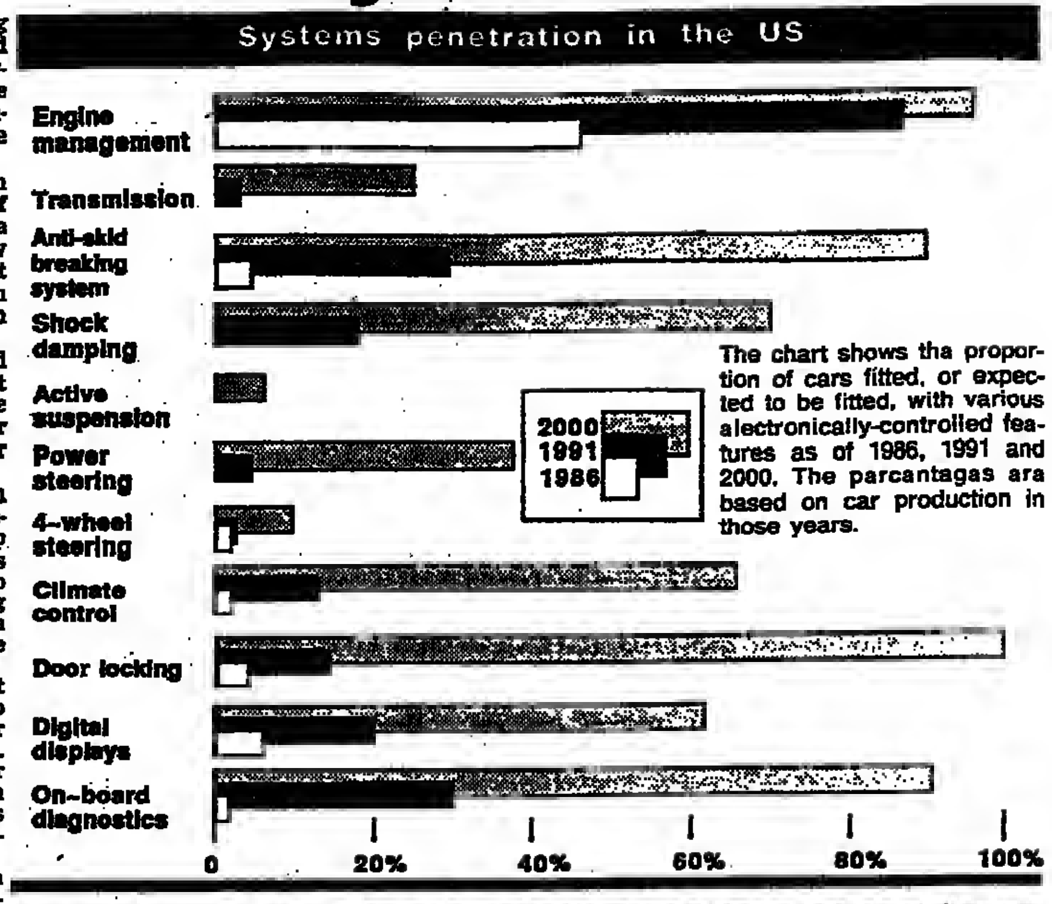
John Griffiths



General Motors's exotic record-breaker: the Sunraycer with solar-powered panels

Plans intensify for a world-competitive car in terms of cost and quality

All eyes are on Project Saturn



THE EYES of the automotive world are turned toward an experiment being conducted in Spring Hill, Tennessee, a tiny town about 30 miles south of Nashville.

Spring Hill is home to General Motors' Saturn Corporation, which has been assigned the challenge of building a world-competitive car in cost and quality.

In the early 1980s, a General Motors" study had discovered that a small car to replace the now-extinct Chevrolet Chevette could be built in Japan for about $2,000 less per car than it could be built in the US under existing conditions.

Project Saturn was formed as the corporation's "clean sheet of paper" effort to develop innovative ways to produce small cars in the United States that would be cost-competitive with the lowest-priced imports.

Then, in January 1985, General Motors announced that it would create a sixth car division, along with Chevrolet, Pontiac, Oldsmobile, Buick and Cadillac, called the Saturn to prodnce the world-competitive automobile. The occasion marked the first new name-plate added to the General Motors' family for more than 50 years

A separate company was necessary, GM officials said at the time, because different technology, systems and organisation developed by Project Saturn required a new structure distinct from General Motor'a other automobile operations. Actual production of the Saturn automobile remains some time away; the car is due to make its debut in the summer of 1990 as the schedule now stands.

However, prototypes of camouflaged Saturn cars are now being tested on North American roads. Construction of the highly-integrated manufacturing facility in Tennessee is on echedule. Foundry equipment is now being installed in the first finished building, which will house power-train operations. Workers are being recruited from other General Motors' plants to run the plant when it opens.

Much of the way Saturn intends to achieve its goal of building a world-competitiva automobile is by forging new relationships with management and workers, with suppliers, with its dealers and ultimately with its customers.

"The Saturn process is based on win-win," Saturn President Richard LeFauve has said. "The union wins, GM wins. The dealer wins, GM wins. The customer wins, GM wins."

As LeFauve explains it, Saturn is built on a teamwork philosophy – "a principle of partnership with involved workers, suppliers and dealers working together to achieve consensus," eliminating the typical pyramid with the man at the top telling everyone else what to do.

Employees, both management and workers, are organised into teams by product line rather than by employee function. Workerson the casting line, for example, are on the team involved in designing the engines and transmissions that they ultimately will build.

A metal-casting team, a smaller team within the power-train team, consists of product designers, process engineers, production engineers, union workers with experience on the factory floor and a financial person.

General Motors has negotiated an innovative contract with the United Auto Workers union, the union which represents nearly all of General Motors' hourly workers in the US, to cover Saturn workers. The contract, described as historic by labour experts, is separate from the national contract covering the rest of General Motors' employees.

The contract provides a base salary for workers that is about 80 per cent of the current salary of General Motors workers. The difference is expected to be made up with Saturn profit sharing and rewards for productivity and quality, a technique General Motors is counting on to add to productivity gains.

The contract also contains fewer rules covering workers that in other General Motors' assembly plants prohibit a worker from doing more than one or two jobs. In most plants, workers fall into one of more than 100 job classifications and are only allowed to do the job in their job category.

At Saturn, there are no more than five job classifications. Production employees could work a variety of jobs in teams. The goal is to lessen boredom and increase the quality of work.

In return, workers gain seats on management committees that plan work schedules, assignments and employment levels as well as the number of cars to build, how to build them and how to sell them. A union worker, for example, will sit on the board of the committee which selects the advertising agency to handle Saturn's $80m a year account, a move unprecedented in the US motor industry.

The contract also attempts to break down the differentiations between management and labour. Like managers, workers do not punch a time clock. Management and labour share cafeterias and parking lots. Workers have more say in the operation of the Saturn plant than workers at other General Motors' plants have.

Slow, problematic start-ups at some of General Motors' newer, high-tech plants, including the Detroit-Hamtrack plant in Detroit and the Buick City complex in Flint, Michigan, have made the auto company re-evaluate how it implements new technology and how it trains workers to use the new technology.

Instead of trying to start every high-tech element of a new assembly plant, including Saturn, at once, high-tech equipment will be phased in gradually. Also, high-tecb equipment is being tried out at other General Motors plants before being installed at Saturn.

Little has been revealed about what high-technology items will be installed at Saturn, but it is known that it will use the lost-foam process of casting. The technique involves a plastic-foam shape of a desired object that is surrounded by packed sand. As molten metal is poured into the foam shape, it causes the foam to vaporise, and the metal assumes the foam's shape.

Lost foam has not been used previously in making engines, although car-makers have been studying it for same time. At Saturn, the foam methods will be used in making alnmininm engine castings. Traditional die casting will be used in making aluminium transmission bousings.

The lost-foam process has been labelled the highest risk part of Saturn, yet a key to its success for quality, cost and reliability.

To build a low-priced compact car, Saturn executives argue, as little metal as possible must be used and as little machining as possible done to keep costs down. Saturn has also established new relationships with its suppliers. Its goal is to have as few suppliers as possible to simplify deliveries made to the plant and to carry no inventory of parts.

At traditional automobile plants, suppliers are notified that a car-maker needs a given part and bids to do the job are solicited from the suppliers. Generally, the supplier with the lowest price is awarded the contract of a short duration.

At Seturn, suppliers have begun working with the car company before they have been awarded the contract. They have helped in the design and planning stages for the vehicle.

Teams of Saturn employees working on a given system of the car then award contract covering the life of the Saturn car. The contracts are awarded based not only on price but on quality and the technology provided by the supplier.

For example, Armco Inc, a US steel company, was recently selected as the sole supplier of steel to Saturn. The company, which has one of the largest research organisations in the steel industry and is a leader in coated steels, had worked on the Saturn project since early 1985, three years before it officially won the contract.

Saturn intends to keep no inventory on its plant floor by employing the Japanese-style just-in-time delivery systems beyond levels now used by most other US car-makers. About 150 major suppliers will operate within a 250-mile radius of Spring Hill, Tennesse, providing parts to the Saturn plant on a just-in-time basis.

The car's debut is set for the summer of 1990

Saturn also is attempting to forge all-new relationships with its dealers – relationships that are often adversarial between a traditional automobile manufacturer and its dealer body.

The Saturn team studied various kinds of alternative distribution methods for its cars including mail-order catalogues, fast food restaurants and department stores such as Sears & Roebuck and K Mart Corporation. However, the team concluded the traditional system of using franchise automobile dealers remained the best distribution method with some changes.

A group of 16 existing General Motors dealers helped put together the plan for how the dealer network will work. They decided that Saturn and its dealers needed to create a new kind of partnership. Dealers, they concluded, have to be involved in the selection of other dealers and in all key decisions affecting them.

Thus, three dealers will serve on the Saturn Customer Action Council, a high-level policy team that will undertake strategic business-planning with customer satisfaction as its primary focus.

Six dealers will serve with six Saturn representatives on tha franchise-development team, which has authority to make decisions on proposed changes in the franchise agreement. Disputes between a dealer and Saturn will be settled through a mediation and arbitration process, which includes dealers, rather than resorting to the court system.

Saturn will select a limited number of dealers for each geographic territory. Those dealers will be allowed to have multiple locations, including sites in shopping centres and office complexes. There will be no set formula covering all dealers. Each dealer will develop a marketing approach tailored to the assigned geographic region.

Saturn has received nearly 2,600 applications for the Saturn franchise, which will cost a dealer an initial investment of $2m to $3m and will increase as locations are added. Saturn is sifting through the applications and will begin to appoint dealers, first in Southern California and then in New York, early this summer.

Dealers will he selected, based on their commitment to customer satisfaction. About 75 per cent are expected to be existing General Motors dealers.

By the time the Saturn car debuts in 1990, about 100 dealers in 30 major markets will have been appointed. Initial markets will be primarily on the East and West Coasts, where sales of imported cars are strongest, major cities in between.

As production at the Tennessee plant increases, more dealers will be added. By the end of the first six months of full production at the plant, Saturn plans to have 200 dealers with 300 to 400 locations on board. Ultimately, Saturn expects to have 250 to 350 dealers.

Saturn also has established a permanent 5,000-member consumer panel to guide product development and marketing effort. The 5,000 includes people who fit Saturn's target-buyer profile or are consumers who are more likely to purchase an import rather than domestic car.

The question remains of whether the Saturn experiment will work. Even General Motors Chairman, Roger B Smith, a champion for Saturn, is not willing to give a definite 'yes.' Mr Smith and other executives have said Saturn will be a failure if the ideas, particularly those regarding relationships with workers, suppliers and dealers, are not implemented throughout the corporation.

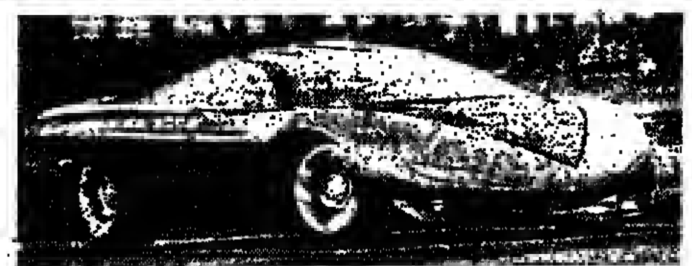
Yet, sceptics remain inside and outside General Motors. Some doubt if Saturn will ever reach fruition. And, in fact, at times in Saturn's short history, it appeared the whole project could he dismantled.

General Motors did announce in late 1986 that Saturn would be phased in. The first phase of the plant would produce between 200,000 and 250,000 cars a year instead of the 500,000 originally planned. Only 3,000 workers would be employed rather than the 6,000 originally planned. The $3.5bn capital spending plan would he stretched out over a longer, yet unspecified time-scale.

Already, the type of car Saturn will be has changed since the corporation was established in 1985 and e prototype rolled out for the Press to see. Instead of being a low-priced, small car, the Saturn models are likely to be more expensive and slightly larger than originally conceived.

And, ultimately, the question remains, will the car *sell?* General Motors executives have said Saturn will be a success only if 80 per cent of its sales new business to General Motors. Yet, some observers inside and outside of General Motors claim that the more upscale Saturn car will overlap with existing General Motors' cars aold through the Chevrolet and Pontiac divisions.

Michelle Krebs



Out of Saturn's orbit: two concept cars from other General Motor's divisions – the Pontiac Banshee, above, and the Buick Lucerne, below.

CAR OF THE FUTURE 5

What kind of engine is the car of the next century likely to have?

The balance between power and economy

THE TASK of the engine designer who must provide "the power plant" for the car of the next century has been made increasingly difficult by a conflict of interests.

It is not simply that the consumer demands more power for increased performance, but that concern for finite fossil fuel supply dictates improved economy, and that worries about the environment call for ever- cleaner exhaust emissions. The balance between these three major factors, plus a number of more minor ones such as the need to reduce noise, both inside and outside the car, keeps shifting.

At the moment, the main concern is for more power. The consumer has forgotten the traumas of 1974 and 1979, and in the opinion of some industry leaders, has forgotten much too quickly. Today's cars are more economical than those of 10 years ago, but the trend has slowed almost to a standstill – and the improvemant which has been achieved is due only partly to increased engine efficiency, the rest having come from other design factors such as better aerodynamics.

Designers are still under pressure to reduce exhaust emissions, but, for the most part, the technology is available to meet proposed emission limits. The engineers wish mainly that political squabbling over the setting of limits would give way to agreement on firm targets to which they can work with long-term confidence.

So what is the designer of the future engine striving after? It depends where he thinks the balance will be in 10 or 15 years' time. A third great energy crisis will certainly shift attention away from the search for more power and back to economy. The prudent industrial planner needs to allow for the possibility: Volkswagen's chairman, for instance, says that engine production lines could be switched from petrol to diesel output in a matter of weeks.

For the time being, however, most people are happier extrapolating present trends. The last few years have seen a rapid increase in the number of engines with four valves per cylinder instead of two, with turbochargers or other forms of supercharging, with much more efficient electronic control of fuel injection and ignition.

These trends are likely to continue, however the balance of requirements may shift. For the moment, they are all being used to improve power output while keeping exhaust emissions in check and fuel economy at a reasonable level. Yet all of them might play their part in improving economy while keeping power at a reasonable level.

It may be obvious that electronic control systems can be recalibrated to favour fuel economy rather than power output, but the case for four-valve engines and supercharging is less apparent. In fact, the use of four valves per cylinder makes an engine fundamentally more efficient by making it easier to pump air through itself, reducing the "pumping losses" which sap some of the power output.

Already, some car manufacturers – and most of all the Japanese – are using four-valve engines in cars aimed at the family motorist as much as the sportsman. Supercharging, whether by turbocharger or other means, may seem to be aimed exclusively at increased performance but this is not necessarily the case.

When turbocharging first became fashionable it was often pointed out, and rightly, that the system recovered energy which was otherwise wasted down the exhaust pipe. The fact that turbocharging has mainly been used to boost the performance of already fast cars, with little evident benefit to fuel economy, does not detract from the energy-saving potential of the system.

Turbocharging does, however, pose other engineering problems and, as a result, there has been a renewed interest in mechanical supercharging. One of the most interesting developments is Volkswagen's "G-Lader," a light and simple yet effective device which works on the basis of squeezing air through the passage between two snail-shell shaped walls (hence the name) moving relative to each other.

Volkswagen believes the G-Lader has great potential to shift the current imbalance between power output and torque, or pulling power. An engineer will explain that power versus aerodynamic drag determines maximum speed, while torque versus weight determines acceleration.

Sadly, any attempt to increase the torque of an engine by conventional means also increases the peak power and results in a quite needless further improvement in the maximum speed of the car to which it is fitted: all the 1.6-litre family cars in current European production will exceed 100mph with ease.

The G-Lader may provide the means to boost engine torque at moderate speeds without adding more high-speed power – and other systems may appear with the same object. Yet other engineers are delving more deeply into the fundamental working of the engine itself.

There are great potential advantages, for instance, in being able to vary the timing of valve opening which in current engines is a fixed compromise between the needs of different working situations.

It would also help if one could vary the compression ratio of an engine, increasing it whenever the opportunity permitted so as to improve the basic thermodynamic efficiency. Both of these techniques would call for still more sophisticated electronic control systems as well as mechanical ingenuity, but they are being seriously studied.

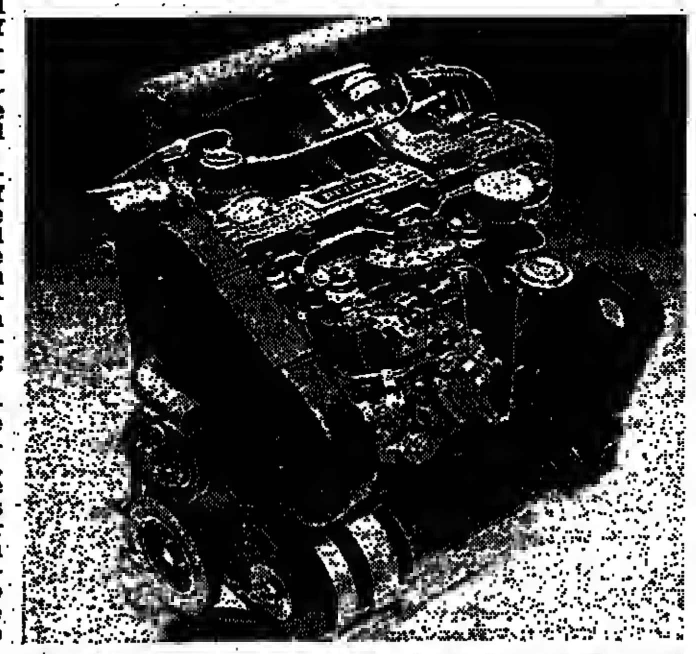
What kind of engine is the car of the next century likely to have? Although the Wankel rotary engine lingers on and experiments continue with gas turbine power units, most engineers agree the conventional reciprocating piston engine will continue to hold sway.

A typical family-car engine, two or three design generations hence, will use a variety of advanced techniques to achieve high output (and a very different balance between power and torque) from a unit of small size and light weight.

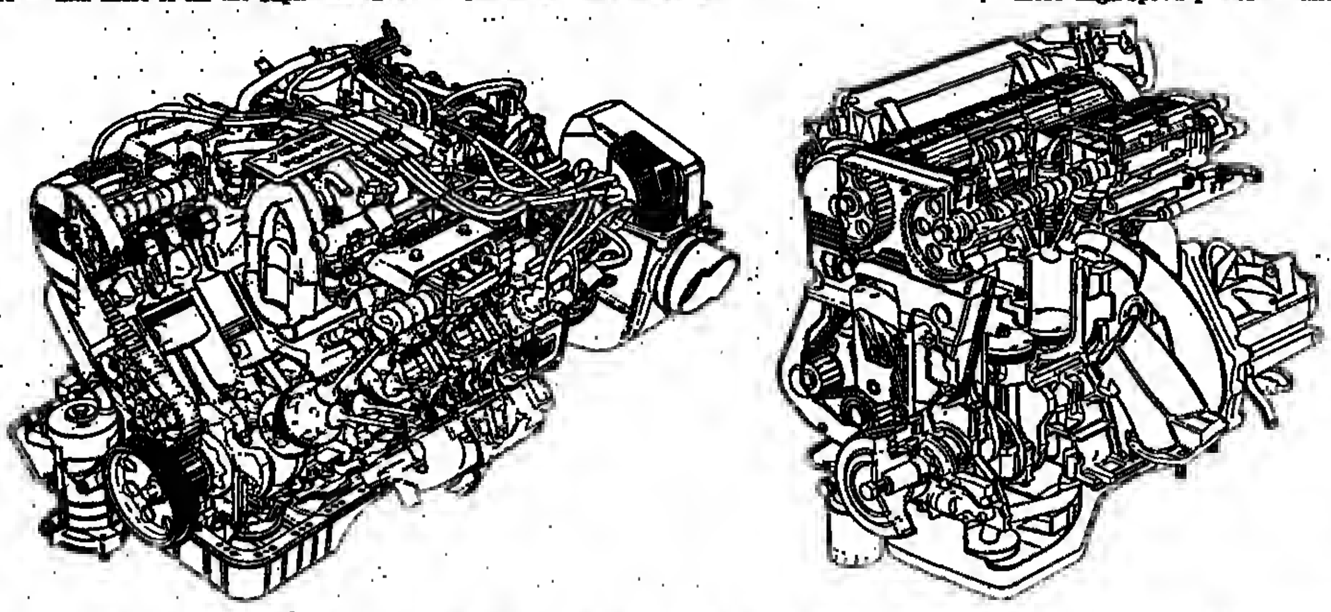
It will almost certainly have four valves per cylinder; it may well have some kind of supercharging. It will definitely be equipped with an electronic control system of great sophistication, checking and governing operation cylinder by cylinder.

As a further challenge to the designer, it will require virtually no maintenance beyond a change of oil and sparking plugs at infrequent intervals.

Jeffrey Daniels



Prima 65: the first high speed direct injection diesel engine designed for passenger cars (see right)



Variations on a theme: the Honda V6 (left) and M16 multiple valve engines fitted to the Rover 800/Honda Legend

Electric cars

Potential limited

MANY YEARS ago, a General Motors engineering chief remarked that the practical electric car was 10 years away – as it had been for the last 50 years.

Recent developments have largely justified such scepticism. The purely electric car will always be limited in its range and overall efficiency by the need to carry with it a huge weight of battery if it is to have a practical cruising range. This is despite improvements in battery technology and especially the experimental adoption of new electrolyte combinations such as sodium and sulphur which give a much higher "energy density".

Specialised electric vehicles using the new batteries are likely to find an increasing market in such areas as urban delivery – an extension of the milk float principle (Britain's milk floats form the world's largest fleet by far of road-going electric vehicles).

Motor industry engineers remain highly sceptical about the prospects for an electric car, however. If the need for quiet, non-polluting transport in urban areas becomes more pressing, one likely solution is the "hybrid car". This would be an electric car but with a smaller and lighter battery bank, its capacity sufficient for a few miles of driving only, but with a generator driven by a small internal combustion engine. The engine could be run in less environmentally sensitive areas to top-up the battery.

Several hybrid prototypes have been demonstrated, but much work remains to be done to render the idea completely practical. Almost inevitably, one avenue of research leads towards more capable electronic control systems.

Other engineers argue that the overall energy efficiency in the next century will be best served by using electric power to make some form of liquid fuel for vehicles.

Fears about the "greenhouse effect" of accumulated carbon dioxide in the atmosphere have encouraged work on fuels with reduced or zero carbon content, such as alcohols or pure hydrogen. On balance, it seems much more likely that in 50 years' time, cars will have engines burning such fuels rather than electric propulsion.

Jeffrey Daniels

Diesel engines

Important option

THE TWO great energy crises of 1974 and 1979 brought the diesel engine to new prominence and sales soared. Most car companies thought it worth while to add diesel models to their range and some of the new designs were a great improvement.

Performance waa improved, noise was reduced and fuel economy maintained at remarkable levels by petrol engine standards. But more recently, the diesel has suffered something of an eclipse. Fears about the content of diesel exhaust emissions, and uncertainty about the standards which might be introduced to control these, have cast a cloud over sales.

The European consumer'a increased interest in performance, and reduced concern for fuel economy as oil prices fell and then stabilised, has also had its effect.

Even so, the diesel remains an important option especially if there should be a further energy crisis, and specialist design teams are still looking for fundamental car diesel improvements.

Of these the most important is probably direct fuel injection which promises much better overall efficiency through reducing the "pumping losses" which occur with the indirect injection used in almost all current small, high-speed diesels.

The direct injection (DI) diesel poses severe engineering problema with the threat of high peak stresses and noise levels, and the need for very high fuel injection pressures.

Perkins, working with Rover, has won the race to produce a DI diesel suitable for car use, though at the moment this unit, the Prima, is fitted only to the Maestro van.

Work continues especially on more aophisticated engine mounting systems to quieten the installation. The Austrian Steyr-Daimler-Puch company has also demonstrated an acceptable and ingenious DI diesel engine in cars as diverse as a Jaguar XJ6 and a Mercedes G-Wagen.

Thus far, the electronic revolution has hardly reached the diesel but that is likely to change before long with the adoption of electronic controls for injection pumps, for more flexible and precise control of injection timing.

Other measures now being proposed for use in petrol engines (and especially, perhaps, variable compression ratio) may also be applied to the diesel.

Jeffrey Daniels

Engineers are studying more seriously the automatic operation of a manual gearbox

Why CVT may not be the answer

A GOOD DEAL of excitement was generated in 1987 by the appearance of three small cars – two European, the Ford Fiesta and the Fiat Uno, and one Japanese, the Subaru Justy – with continuously variable transmission (CVT).

The principle of CVT is that, instead of a gearbox providing a set of discrete drive ratios, the ratio is infinitely variable between its upper and lower limits. In current systems, this is achieved by running a specially shaped drive belt between two pulleys whose effective diameters can be varied by squeezing the sheaves together or easing them apart.

Tha advantage of CVT is that it should provide tbe ideal drive ratio for any situation, allowing the engine to be run at the most efficient combination of speed and load. It should also make driving more pleasant by eliminating the jerks of gear-changing, manual or antomatic, leaving only a smooth progress as the ratio changes by degrees.

This being so, is CVT likely to sweep the world of car transmissions before it? Many engineers still think not. While the principle itself is admirable, there are snags too. In order to make a practicabla CVT system, allowance has to be made for starting from rest – the present CVT cars use an antomatic clutch – and also for providing a reverse gear, a further complication.

More fundamentally, CVTs appear to suffer inherently greater internal power losses than geared transmissions (a CVT may be less than 90 per cent efficient, a geared system 96 percent or even better) and this cancels out some, perhaps most, of the theoretical gain achieved by running the engine efficiently.

It appears also to be true, on current evidence, that the CVT has trouble in coping with the torque output of anything but a very small engine: both Fiat and Ford fit their systems only to the gentle 1.1-litre versions of their superminis.

If the CVT fails entirely to fulfil its promise, then what are the transmission alternatives for the future car designer?

In the first place, we should remember bow far transmissions have come in the last 20 years. In the 1960s, the three-speed manual gearbox effectively gave way to the four-speed; in the 1980s, the four-speed has given way to the five-speed, and some of the most expensive sporting cars are now beginning to appear with six speeds.

At the same time the three-speed automatic transmission is largely being supplanted by the four-speed. There are two reasons for this proliferation of ratios.

Most fundamentally, the more gear ratios there are, the more nearly a conventional "stepped" gear transmission can approach the CVT ideal of keeping tbe engine working as efficiently as possible.

Second, the higher performance of most cars, and especially the higber maximum speeds made possibla by improved aerodynamic body shapes, has meant that the gap between a first gear low enough to give easy hill-starting, and a top gear high enough to avoid engine over-speeding, has become too wide to be bridged by only two ratios.

Volkswagen's former Head of Research, Professor Sieffert, held the opinion that, if a car's drag coefficient were to be reduced to 0.25 (from the best current values of 0.29 or so), then a six-speed gearbox would become essential.

The trouble with a six-speed gearbox is that only the most enthusiastic drivers are likely to welcome the idea. Some motor industry market researchers say they have already detected resistance to five-speed gearboxes, wbataver their advantages. Therefore, if the number of gear ratios is to be increased, some form of automatic shifting becomes increasingly likely.

In Europe, unlike America, the conventional automatic transmission has never become the norm, although its market share continues to creep up, especially in north European markets. Now, however, engineers are studying much more seriously the idea of achieving automatic operation of an essentially conventional manual gearbox, which might potentially be done at much lower cost.

Today's automatics use epicyclic gear trains, fluid torque converters and other specialised, high-cost components. The idea of a gear-change system which would imitate the movements of a skilled driver first appeared over 50 years ago and predates the automatic transmission as we know it today.

At that time, several earnest projects proved the idea to be a non-starter – but today's engineers have electronics at their disposal, and far more sophisticated sensors and servo controls than the pioneers could have dreamed about.

There are cnrrent projects along these lines within the development departments of several major car manufacturers.

There is of course no objection to increasing the number of speeds within a conventional automatic transmission. Having already almost universally gone from three to four speeds and added a number of new features, such as "lock-up", to prevent torque converter slip losses in the higher gears, and driver selected shift patterns (the ZF transmission in the latest BMW models can be asked for "sport" or "economy" gear selection), antomatic designers are now looking towards five speeds.

One of Toyota's most senior engineers has said that such a transmission, with electronic control of course, could match or exceed the performanca and economy achieved by a skilled driver with a manual five-speed gearbox.

In a sense, the world of transmissions is becoming widar. Where 20 years ago the bulk of interest and attention was devoted to the clutch and gearbox, tha spread of four-wbeel drive and other systems has added variety and interest – and new engineering challenges.

Four-wheel drive is heavy and expensive and likely to remain so, yet interest in it continues to increase to the extent where European 4WD car sales in 1987 were nearly 18 per cent up on those of 1986.

For very powerful cars, 4WD has the advantage that it reduces the risk of wheelspin and control problems – but it has a lighter, cheaper rival in the form of "traction control systems" which sense when wheelspin is just starting, and cut back the engine power to stop it getting out of hand.

In essence, such systems work like anti-lock braking in reverse, and in fact they can share many of the same components, especially the wheel-mounted speed sensors, to reduce cost.

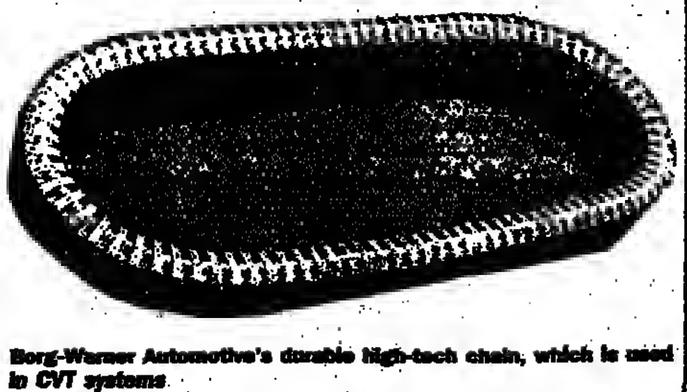
Although small teams continue research into other forms of transmission, such as electric or hydrostatic drive, it seems certain that the beginning of the next century will see cars still equipped with gearboxes and drivelines of types already familiar. But a far higher proportion are likely to have some form of electronically controlled automatic gear shifting, and more drive ratios to make the most of the engine output available at all times.

Jeffrey Daniels

High technology components

THE projected market shares for high technology car components, according to Volkswagen forecasts, include the following:

- **Single engine control:** likely to rise from 30% to 70% in countries with strict emission legislation.
- **Electronic diesel control:** likely to rise to 25% in larger cars.
- **Super-charging:** In West Germany, for exemple, 20% will use mechanical or turbo-charging.
- **Anti-skid breaks:** could well rise to 33% in Europe.
- **"Active" suspension systems:** likely to win increasing market shares.



Borg-Warner Automotive's durable high-tech chain, which is used in CVT systems

Automotive glass

Super-bubbles ahead

UNTIL relatively few years ago, glass in vehicles was perceived mainly as a medium to see through and provide protection from the elements.

Now, however, the material is shaping up as one of the key elements that will make possible much more radical approaches to the way in which cars of the future will be designed and produced.

Some of the current trends and possible future developments are mapped out by Dr Ronald Skeddle, chief executive of Libby-Owens-Ford, a member of the UK-owned Pilkington glass group.

Dr Skeddle sees them leading to the day when "cars and trucks will feature glass bubble designs in which entire passenger compartments will be surrounded by glass, bonded to strong, lightweight plastic bodies."

If and when they appear, they will hava been made possible mainly by new process technologies.

Currently, the most radical of these, is press-bending. In this, windscreens, rear screens and other major glass areas are heated and processed by hydraulic presses and specially-constructed dies.

"Careful control of temperature and pressure makes it possible to produce automotive parts which incorporate decidely radical shapes, and even right angles, while maintaining the required optical characteristics of tha glass," says Dr Skeddle.

The process represents a substantial advance on the currently conventional technique of gravity bending to achieve some of the double curvature shapes currently required by car, and to a lesser extent, truck producers. As its name implies, this process involves allowing gravity to shape the glass over a mould located within a furnace.

It is when press bending is allied to another process, encapsulation, that the full possibilities for glass useage can be expected to emerge.

This entails snrrounding the glass component with a moulded protective rim in which can be incorporated fixing points to the rest of a vehicle, windscreen wiper mounts or other features.

"The result," says Dr Skeddle, "is a complete, ready-to-instal modular component which can help improve vehicle aerodynamics, appearance and assembly-line efficiency, particularly where robotics and other highly automated systems are in use."

Pilkington itself is already using two encapsulation processes-reaction injection moulding (RIM) and polyvinyl chloride (PVC) moulding. The advantages of the former include its ability to accommodate complex shapes and large components. PVC moulding is less flexible in its application because, unlike RIM, it requires beat and pressure. However, it is a cheaper process, and well suited to smaller, simple shapes. Both processes have themselves been automated by Pilkington's plants in Michigan in the US and im Ontario, Canada.

In Japan, sensors can turn on wipers when moisture is detected

Vehicle safety has already been improved hy the widespread adoption of laminated glass windscreens in lieu of shatter-prone tempered glass, and the use of bonded-in elements to heat rear screens for improved vision – an innovation which in the past couple of years has been applied by some vehicla-makers to front screens as well.

The relatively slow process of de-frosting involved with conventional technology, however, may soon be speeded up sharply.

Pilkington's LOF research centre at Toledo, Ohio, has developed car windscreens similar to those used in military aircraft, and which are capable of clearing 2.5mm of frost or ice in less than three minutes in a temperature of -18 degrees C.

Crucially, they are heated not through a matrix of thin wires but a microthin metallic coating – invisible to the naked eye – which is an integral part of the windscreen.

Meanwhile, Japanese car makers are already bringing into production vehicles with rain sensors which eutomatically turn on the wipers when moisture is detected.

Development is under way of automotive glass which will both bounce back soma of the solar energy which heats up to uncomfortable levels tbe interiors of vehicles left in the sun, and block out that part of the solar spectrum which causes materials to fade. Not least, by the early 1990s jet fighter-style "head-up" instrumention should be available, in which data is projected directly in front of the windscreen using holography.

Apart from its *safety aspects*, the "hud" display has important implications for vehicle designers, in that much existing dashboard display area will become redundant and thus available for other uses.

All the above take the automotive glass of the near future a very long way from its origins, not least in terms of value-added for its manufacturers.

As Dr Skeddle points out, it provides a classic example of bow research and development by a snpplier itself can create new, high value-added markets for what might seem at first sight to be a *simple, straigbtforward* product.

John Griffiths

John Griffiths describes Fiat's use of robots

A plant of the future

FIAT HAS spent $1.7bn to bring into production the Tipo hatchback, *unveiled in January, which* it hopes will help it to secure the European new-car market leadership this year.

Much of the money has been spent on the manufacturing facilities for the car, which is being built at Fiat's Cassino plant.

It was there, and at its sister plant at Rivalta, in 1978, that Fiat made a major contribution to the launch of the Enropean car industry's robotics revolution with the "Robogate" body welding system for its Ritmo/Strada.

Ten years on, Robogate is also being used for the Tipo, but in a plant that is otherwise unrecognisable. And it seems difficult to refute the claim of Fiat Auto's managing director, Mr Vittorio Ghidella, that Cassino has once again become Europe's, and possibly the world's, most advanced plant in commercial production – virtually a factory of the future, operating in the present.

The design and engineering of the car – which includes the concept of "zero defects" – has been integrated not just with its intended prodnction facilities, but with those that cbeck the quality automatically at the end of the production line as well.

In setting out the design parameters for the car, says Mr *Ghidella, it* was decreed that production should be as automated as possible. It would mean assembling 14 component "modules", each to be pre-assembled separately away from the oroduction line (*see illustration*). Each module was also to be pre-tested, *"so that each could* be *perfect"*, according to Mr Ghidella.

Although Fiat says there have been no net job losses, few of the plant's total complement of 5,000 work on theproduction line any more, having been retrained into plaint maintenance, servicing the automated systems and similar tasks.

"They have been taken away from the nasty parts of assembly," according to Mr Ghidella – and not least from one of the traditionally most cramped and uncomfortable assembly jobs of all, installing the dashboard and control pedals.

Fiat has taken the view, shared by most other western volume producers, that low Japanese car production costs have more to do with disciplined work forces and work practices than automation; and that, since most western workers would not tolerate such regimes – a response of which Mr Ghidella is not particularly critical – then European car companies have no option but to make maximum use of automation.

There is much innovation – for example, the first use for mass production of laser welding *of sheet metal. It is used* in the structure making up Tipo's engine compartment, and, as a continuons weld, it actually strengthens the structure, unlike spot welds.

But what distinguishes Cassino is not the introduction of new *types of automation so much as* the sheer volume of automation, and its integration into a "start-to-finish" production system, on which Fiat places most emphasis.

Just as examples: process control is automated; so is subframe assembly, engines from the Termoli engine plant then being mated to it, together with suspension, steering rack, struts and wheel-hubs – all without human intervention. The robotically-assembled bodyshell is mated automatically to the complete driveline and subframes.

Other "seeing" robots install windscreens, position and bolt on *wheels, install seats and even fill* the petrol tank as it comes off the prodnction lina for simulated road-testing and systems checks – which is also carried out by by robots.

Painting and dimensional checks are automated, while even special screws with their own inbuilt washers have been developed for a robot population, which in turn has been developed and produced mainly by Fiat's own Comau subsidiary.

Altogetber, there are 403 robots, which weld, manipulate, fasten, paint, apply primer and test. They are overseen by 49 *video control systems.*

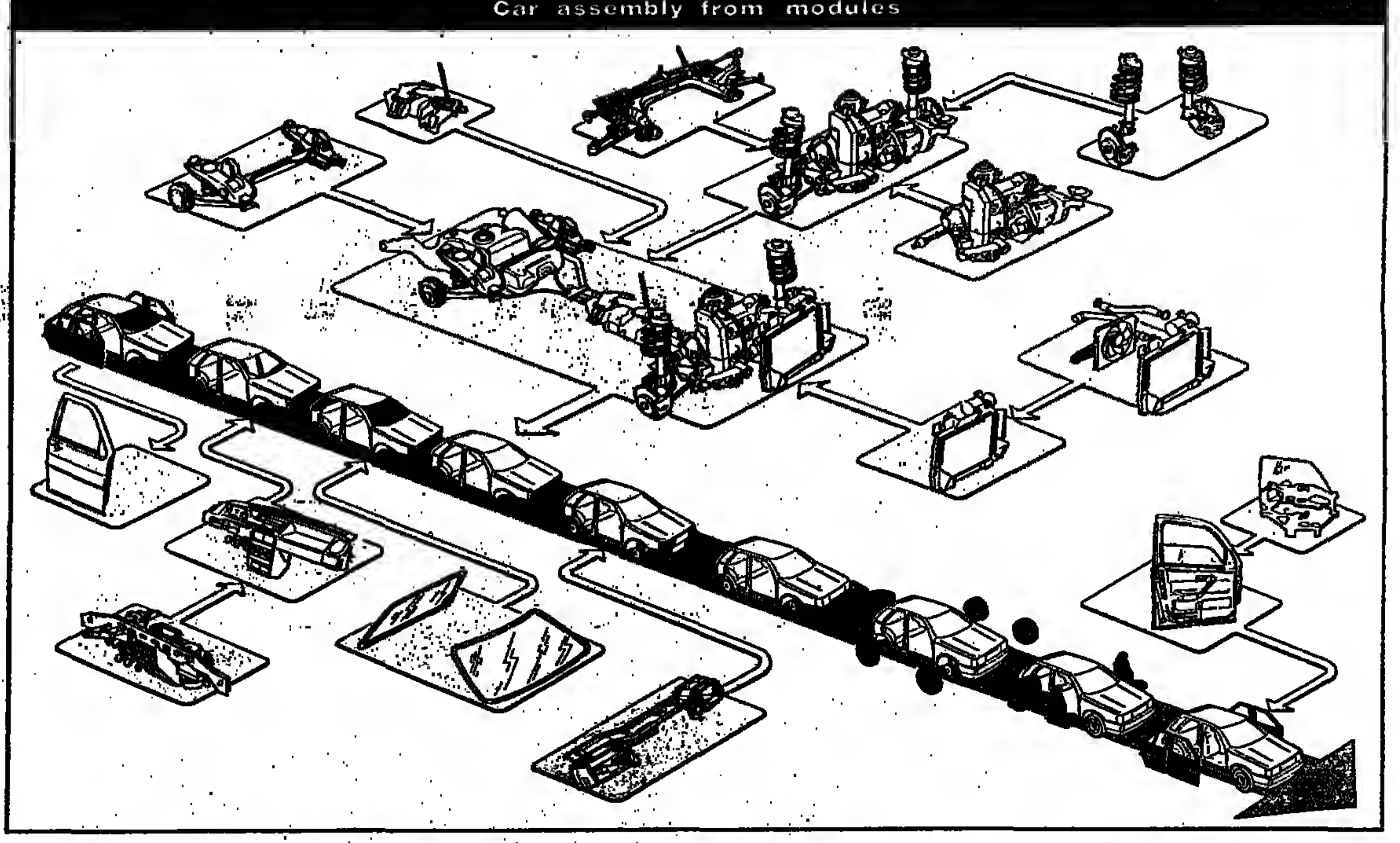
Fiat emphasises its belief that the Cassino plant is the first step towards complete automation.

The investment will pay off in other ways, bowever. As the group points out: the versatility of the machinery is such that it will be able to produce Fiat's own cars of the future with very little modification.

That applies even if there are significant changes to the materials used in the car.

Consultant Mr Karl Ludvigsen, a former Ford of Europe vice president, who has been carrying out an extensive research programme for the EC Commission on strategic issues affecting the European motor industry, suggests that the likelihood of this is increasing, with aluminium possibly emerging as a challenger to steel for the production of body platforms.

Car assembly from modules



■ Automated production means assembling 14 component modules, each of which has been pre-assembled separately away from the production line

Innovation

Drivers' cautious view of technology

MR AVERAGE Motorist has already demonstrated, to several manufacturers' cost, *that* he is not prepared to accept witb wide-eyed wonder every innovation dreamed up for the car. Witness the speed witb which drivers in tbe mid-1980s told voice-computers to shnt up.

Indeed, one of the fundamental challenges to car-makers, identified by General Motors' chairman Roger Smith, when launching GM into its aerospace and electronics company acquisitions, was how they were to make the right choices among the welter of new technology that would become available before the end of the century.

Developing tha technology itself, he suggested, was almost the least of the problems.

Just what the motorist expects of new technology, and how it may still have an impact on drivers in unexpected ways, has been the snbject of considarable research over the past 18 months by the UK motoring organisation, the Royal Automobile Club.

In the process of reaching a number of conclusions, it has drawn also on input from its US counterpart, the American Automobile Association, and similar organisations in other countries.

The incentive for a thorough study of the subject by sucb organisations is fairly obvious. Most of their revenue comes from subscriptions, the main purpose of which is for the RAC, Automobile Association and otber national equivalents like West Germany's ADAC and the AAA, to provide rescue in the event of *breakdown.*

Whether it will still be possible to effect roadside repairs to a high-tech car of the future – for example, by swapping electronic control modules – or whether they will have become so complex that trailering the vebicle for repair is the only solution thus impacts immediately and heavily on both the type and cost of service that such organisations will be required to provide.

Mr Arthur Large, chief executive of RAC Motoring Services and the author of its final report on the subject, points out that, despite all the excitement generated within the motor industry itself about single developments, most motorists still see car developments as evolutionary. Therefore, ba observes, "the radical changes in store are likely to come as something of a shock."

But it seems that motorists do not actually fear most new technology. They view it, with the odd exception, as an inevitable process that will occur, regardless of their personal opinions or preferences.

The RAC's research nevertheless has identified five main areas where drivers do perceive benefits: safety, linked to innovations such as anti-skid braking and four-wheel-drive; reliability; *lower running costs through factors* like longer service intervals; higher performance, from electronic fuel injection, multi-valve engines and so on; and greater fuel economy.

They far outweigh current new technology dislikes, most prominent of which is the voice computer. Even then, most motorists surveyed were prepared to acknowledge that it could be the forerunner for more useful devices, such as route guidance systems whicb may supply streams of information more effectively, and safely, aurally than visually.

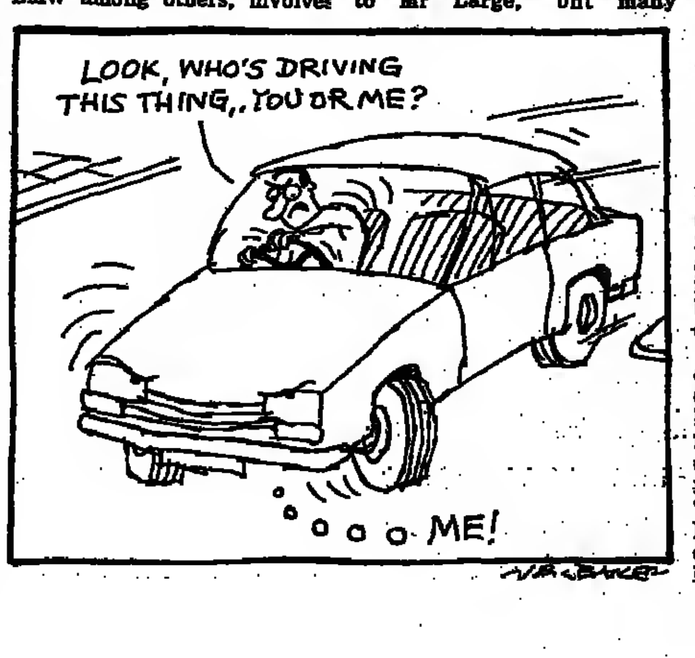
Where *the research did reveal* user-wariness was about systems, most of which are not yet available, and which would remove some control from the driver.

This applied, however, even to the continuously variable transmission, introduced as an option on Ford Fiesta and Fiat Uno models last year. It works by a system of expandable pulleys providing stepless gearing changes which allow the engine to work all the time in its most efficient speed ranges.

But the RAC found that many motorists, without ever experiencing it, felt they would lose some control over the car and possibly some of their driving enjoyment. *It may help to explain* why both Ford and Fiat are finding sales of their 'CVT' cars currently falling well below expectations.

Real anxiety was displayed, bowever, about one likely innovation for the 1990s - active steering. This facility, being developed by Group Lotus and BMW among others, involves electronics mediating between the steering inputs made by the driver and the amount that the steered wheels actually turn. In other words, if the system conclndes that the driver is over-correcting a skid, for example, it will reduce correction actually made at the wheels.

"The advantage of such a system was appreciated", according to Mr Large, "bnt many expressed concern over the idea of the car 'taking over'".



There are other areas where, quite clearly, manufacturers are going to have to watch their step. The great promotions given to extended service intervals by some manufacturers for example, argues Mr Large, are seen as promises unfulfilled when the small prints sets out the need for oil and plug change are 6,000 miles.

He predicts some specific effects of new technology which will have an impact not just on the motoring organisations, but on the entire automotive after-market, embracing parts, accessories and service. Not least, *these include vehicle complexity*, ending do-it-yourself maintenance by the average motorist, and tying motorists to their cars' franchised eervice network because only the franchise dealer can service and repair the car.

From the perspective of its own operations, the RAC acknowledges new technology so far to have been mainly reliable, with most problems occurring with connectors and other peripherals rather than ECUs, or electronic "black boxes". The former, Mr Large suggests, can usually be dealt with by a roadside patrol. But he is concerned about lack of standardisation of such items between manufacturers, and their reluctance to provide information which might make the RAC's planning for parts suppliers, diagnostic equipment and so on easier.

Longer-term, the research sees some ominous problems looming, not just for motorists but manufacturers as well.

Drivers have displayed anxiety about electronic systems over-riding their control.

An example is provided by the buyer of a luxury car like the Jaguar XJ6 in 1987. The first owner automatically has the car looked after, no expense spared, by the franchised network. The second owner, of a car three years old in 1990, is slightly dismayed to find that, unlike Jaguars of old, he, too, must use the franchised network and cut his long-standing ties with his local garage.

At six years old, the third owner could then, for example, have a problem with the anti-skid braking *system. The size of the* bill for this complex bit of electronics could actually force him to sell the car.

And thet is quite apart from the disaster that would undoubtedly ensue from a third or fourth owner's trying to wire his own stereo system into the Jaguar's multiplex circuits.

Are manufacturers of complex executive cars, therefore, risking mncb sharper depreciation of their vehicles – and hence lower sales – as the result of used-car buyers, mostly private motorists, being frightened to take them on?

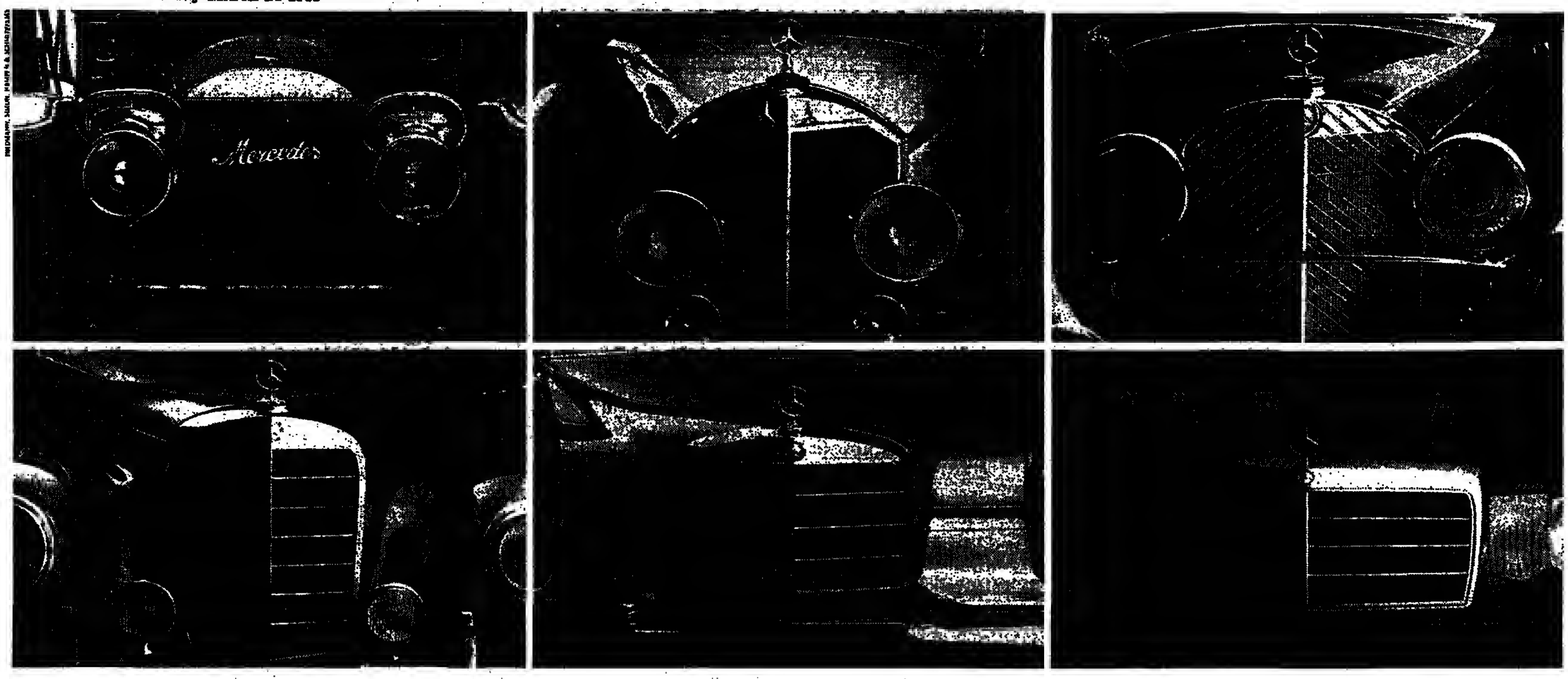
Such qnestions will only be answered fully with the passage of time.

However, the evidence from the RAC's own Recovery Service bears ont tha expectation of motorists that although breakdowns will be fewer, when they occur they are likely to be more severe than in the past and require the vehicle to be recov*ered rather than* repaired at the roadside.

Between 1980 and 1982 the incidence of recoveries actually declined. But from 1983 they rose sharply to from 10 recoveries per 100 members to 12.7.

However, the RAC says it is countering the trend by investing heavily in training, particularly in electronics, and in the development of diagnostic aids. With these, it believes, it should be able to revarse the current upwards trend in recoveries by the early 1990s.

John Griffiths



When innovation becomes tradition.

Ever since Karl Benz and Gottlieb Daimler built the world's first motorcars, the development of new ideas has been a part of our company's tradition.

In the future the ability to set progressive standards in both product development and manufacturing technology will get even more important.

We will ensure the best technical advancement in automotive engineering and the growth of our company by opening up new opportunities in future-oriented fields of activity.

Not size but innovation, high-technology and high quality are important for the successful development of our company and for strengthening our future competitiveness. So we make sure that in the future good ideas will not become a matter of chance and innovation will remain our tradition.

John Griffiths profiles the March racing car and engineering group

Success for free-wheeling thinkers

"Heaven knows how we do it; maybe it's the slap-happy approach which allows us to be free-wheeling thinkers."

Mr Robin Herd was commenting on the haphazard way in which, despite a UK climate which appears systematically to under-value the education, training and payment of automotive engineers and designers, they still manage to coalesce into small groups in British backwaters from which they proceed seriously to emharress rivals overseas.

The March racing car and engineering group, which chairman and managing director Herd took to London's Unlisted Securities Market in spring of last year, provides a classic case in point.

Based at Bicester, deep in the Oxfordshire countryside, it is far better known in the US and Japan than in the UK, where it is remembered more for its 1970s grand prix racing activities – to which it has just returned – than for anything else.

But in the US, and Detroit's motor community in particular, it is famous for having humbled all comers for five successive years in the Indianopolis 500, North America's most famous motor race. Next month, March hopes to make it six.

More important for its financial welfare, for most of those years March cars have been virtually the only ones on the grid - which at around $175,000 per rolling chassis, excluding engine (which March does not make) has provided the company, which cnrrently employs aronnd 200,with a substantial part of its turnover.

In 1986, its last pre-USM financial year, that turnover reached £11.96m, on which it made pre-tax profits of £1.65m.

Last month, some in the City were faintly disappointed at a marginal reduction in profits last year to £1.5m on turnover increased to £13.59m.

The drop was attributable both to the lower dollar and the fact that a serious competitor for Indy cars sales has now emerged in the form of Lola.

However, the 48-year-old Mr Herd insists, turnover from this aspect of the business is already down to about half the total; March expects its grand prix and Japanese racing activities to be increasingly profitable this year – and should also start to benefit in earnest from the consultancy engineering businesses from which, it is now clear, the group's growth is overwhelmingly expected to come.

Earlier this month, the company announced a formal restructuring, into three seperate divisions, to steer this intended growth:

March Racing will make and run the grand prix racing cars under the managing directorship of Herd himself; March Engineering will continue the design and manufacture of Indy and other racing cars for customers under managing director Charles Towns; and Dr Lachlan Shackleton-Fergus is to head up March Technology, the consultancy group which currently has three subsidiaries engaged in materials – mainly plastic composites; wind-tunnel operating and manufacturing, and specialist vehicle projects for outside customers.

March's involvement with wind tunnels says much about the nature of the company itself. Until not much more than a year

An example of how UK automotive engineers are winning in overseas markets

ago, Herd's only interest was in acquiring one so that March could better undertake aerodynamic research for itself and on a consultancy basis.

Attempts to order one elicited a two-year delivery quote from West Germany. So March dasigned, engineered and installed its own in around three months for around £850,000. It now has orders for half a dozen from around the world, says Herd.

They are of the moving ground type necessary to explore airflow beneath a car - an area much more familiar to grand prix car designers than those of roadgoing cars, and where snbstantial improvements in aerodynamic efficiency for roadgoing cars have yet to come.

"We seem to have established that there is not one moving ground tunnel in the US industry," claims Mr Herd.

No-one at March seems to find it out of the ordinary that, once the power of the latest Indy cars began to reach the 1,000bhp mark, the company should feel the need to design and make its own,highly-complex six speed gearbox to handle the power. It completed the project within months and now builds and sells 500 a year to Jaguar and Toyota for their racers, among many others.

Nor does Mr Herd seem particularly excited by his disclosure to the "Financial Times" that he wants to launch March into road-going car production in its own right within the next several years.

The project, he acknowledges, will be given a lower priority than the all-important task of developing the consultancy business.

Nevertheless, he insists, March is fully qualified to build road-going "super-cars" capable of being more than a match for cars like Ferrari's £140,000 F40 model. – "we can build a far better car using our composite technology for that kind of price and at a rate of 100 or so a year." The engine, he says, will be a detuned grand prix unit.

Commercial confidentiality clauses, as with other consultancies, cover most of March's contract design and engineering work with only the occasional, already-achieved completed contract like the development of GM's Oldsmobile Aerotech prototype car or Panther's Solo II sports car capable of being referred to publicly.

But it is clear that March's 1987 turnover will soon be dwarfed, and not just by organic growth of the consultancy business but by a strategy of acquisitions. The North American consultancy industry, expected to provide $1bn worth of engineering and other services this year to US vehicle makers is, Mr Herd admits, an obvious target - but he does not elaborate.

His own views of trends for the car of the future, not surprising, focus heavily on the materials from which they are made. He does not suggest that volume-built cars will be produced in anything other than sheet metal, and says that "appropriate technology" for any given purpose, rather than the use of a favoured material, should rule all considerations - "composites are only one way of skinning the cat," he says..

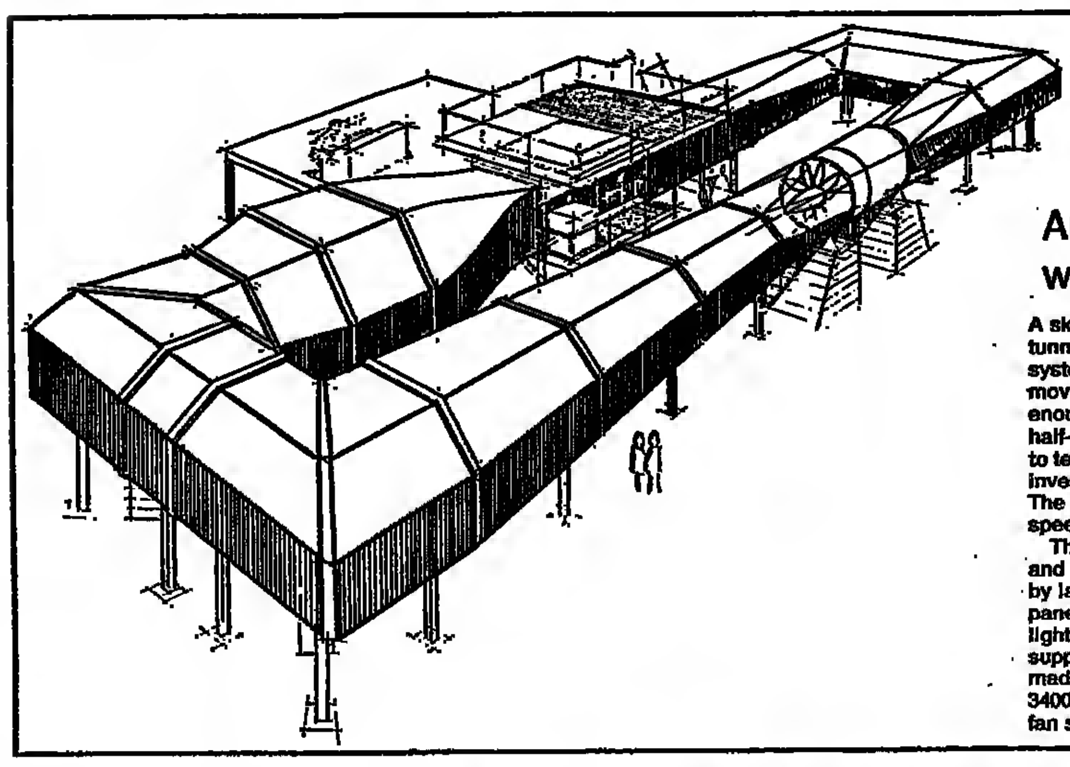
"We can now get composite parts down to the same production tolerances as metal, but with much greater strength. As ever, the difficulty is getting the cost down. We have the Catch 22 situation of needing to get the volume in order to bring costs down, but manufacturers not being willing to commit to it because of the cost.

"Nevertheless, I find it hard to believe that in ten years' time anyone doing Jaguar's annual volume or below will be building bodies in anything other than composites;because you need no skilled labour and toolings costs are e tiny fraction of those for metal".

Higher production volumes would simply mean doubling up on cheap tooling, he says, to get round the difficulties of curing time. Given such an approach, "I don't know where the production ceiling might lie".

Robin Herd acknowledges that "lots of people have to build racing cars 'to get it out of their system' before moving on to something else". That implies something more serious hut, he insists, "I don't want it ever to stop being fun."

But there is another aspect of motor racing on which ha is unequivocal - "it has opened more doors for us, particularly the Indy cars in Detroit, than ever we could have believed. And there can be no better hreeding ground for your young designers and engineers."



An advanced wind tunnel

A sketch of the March wind tunnel. The computerised system is equipped with a moving ground plane, wide enough to accommodate up to half-scala cars and long enough to test two modeis and investigate interference effects. The maximum air and ground speed is 200 kph.

Tha tunnel duct, designed and built by Comtec, is formed by larga composite honeycomb panels which, being stiff and light, need only simpla supporting frames. Comtec also made the blades for the 3400mm-diameter variable-pitch fan system.

Materials and components

Plastics content set to rise substantially

BY THE year 2000, the plastics content of the typical European car may be as much as 30 per cent of its weight. That compares with an average of around 8 per cent now, according to estimates by General Electric, the giant US industrial group.

GE has a more than passing interest in the subject, for it has at least half a dozen companies engaged in supplying the motor industry with services and components, including GE Plastics, which makes high-performance engineering thermoplastics already widely used by vehicle makers.

Not that the crowds flocking around it at the Frankfurt motor show would have been aware of it, but BMW's Z1 roadster, an open two-seater which the West German maker plans shortly to put into production, has strong links with GE Plastics.

GE says the Z1 is the first car in the world to have all its vertical body panels made of injection-moulded engineering thermoplastics.

The front wings, doors, rear quarter panels and other panels are moulded from a GE resin, Xenoy, which is also used in the production of the front and rear fascias from GE's Lomod thermoplastic elastomer.

What is virtually the entire external cladding of the car has e total weight of 120 lbs – and GE hardly appears to be over-stating the case when it says that there are "major implications for fuel economy and performance, in terms of reduced weight and aerodynamic shapig that the new materials make possible."

GE and rivals in this sector like Europe's Du Pont are working closely with vehicle makers on both continents to develop a variety of plastic composites tailored to precise uses.

Such materials have ceased to be confined to non-stressed areas like body panels and are now being used in, for example, car and truck springs. Those developed by GKN for trucks, for example, have better ride characteristics than metal springs at less than half the weight.

But the use of these materials does mean changes in manufacturing, the prize held out for the upheavals being reductions in vehicle development times – "they can be reduced from the present-day cycle of four years or more to two years and less," GE asserts.

The pros and cons of composites, however, remain complex. One very clear-cut advantage of their use is low tooling cost. The mould required for body panels, for example, costs a small fraction of that needed to stamp a sheet model panel.

So it would be be much easier and cheaper to produce variations on a single model, more frequently, than with steel.

Not least of the disadvantages, however, is the cycle time currently required to produce composite body panels. General Motors was able to set a new benchmark for volume production of plastic-bodied cars with its Fiero two-seater (shortly to go out of production), which reached 110,000 units a year at its peak.

This was achieved, however, by duplicating a considerahle number of moulds, and the speed of the processes has fallen wsell short of that required seriously to contemplate the production of mainstream vehicles like a hatchback or medium saloon in quantities of three of four hundred thousand a year or more.

The subject is being taken very seriously by the volume manufacturers, however, and as consultant to the EC Commission on the motor industry, Mr Karl Ludvigsen, points out, "the level at which plastics for this use is considerable viable is going up all the time".

According to the estimates of the Ludvigsen Associates consultancy, it is now standing at around 50,000-60,000 units a year, which is slightly more, for example, than Jaguar's or Porsche's output. The figure co-incides precisely with those calculated by March Engineering, the racing cars group which is embarked npon e number of contracts involving composites technology with vehicle makers in the US and Europe.

That represents a rise over the past couple of years from 30,000 units – but is still well short of what GM achieved.

However, production of a volume cars using plastic body panels is likely to differ considerably from that of the Fiero, suggests Mr Ludvigsen.

"We are looking at systems in which you have a strong and light floorpan, possibly of aluminium, with a plastic superstructure. The composites used would vary with need – thermosets, which offer the prospect of a high quality finish, for flats surfaces and thermoplastics for the side panels, as with the Z1".

However, the Ludvigsen research discloses, "the people making tools for steel are fighting back with cheaper dies, and steel is still a very fine way of making cars".

What proportion of cars of the year 2000 might have entirely plastic hodies is, therefore, en open question. But one pointer in plastics' favour appears, again, to have come from Fiat, which plans to make well over 300,000 units a year of its new Tipo.

The Tipo's entire tailgate, except for the glass, is made of BMC compound, a thermoplastic.It is made up of two shells, assembled and glued.

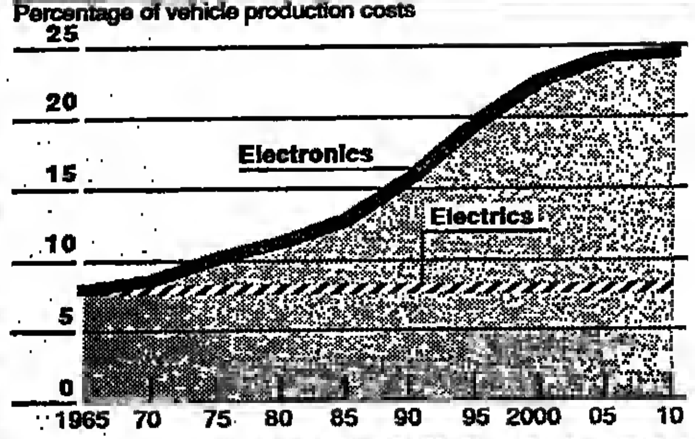
The entirely automated production line making it consists of two parallel lines each containing two injection moulding presses. These make the hatch itself, which is then drilled for other parts to be mounted and finished hy other robots. Yet another robot epplies glue and once the two sections are joined together the tailgate is polymerised in an oven. Lastly it is washed and primed by a robot.

Thus, e fully-finished tailgate is produced et the rate of one every 1.57 minutes.

John Griffiths

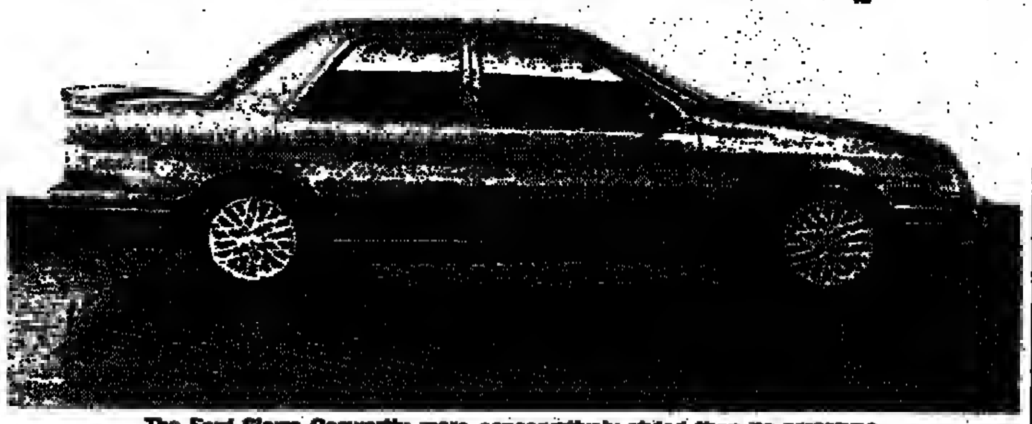
Increase of vehicle electronics

Percentage of vehicle production costs



Cosworth and Ford

Fast partnership



The Ford Sierra Cosworth: more conservatively styled than its prototype

THIS IS a watershed year for Cosworth, the UK Midlands-based engineering company which developed the most successful engine in grand prix racing history.

Its long association with Ford, stretching back to the early 1960s, has finally resulted in its name appearing on a Ford car in full commercial production, the Sierra Sapphire Cosworth.

The first Cosworth-powered Sierra, in hatchback form, caused a sensation two years ago when it was revealed as a 150mph, five-seater challenger to Porsches and Ferraris.

That car, however, was conceived as a "homologation special," of which 5,000 had to be built to allow its use in racing and rallying (long-recognised by Ford as a valuable promotional tool).

Despite its outrageous appearance – its huge rear aerofoil coming to be nicknamed the "picnic table" – public response was so positive that a much more conservatively-styled version, based on the Sapphire three-box saloon, was decided upon.

Ford launched it in February, and it will be built in whatever volumes are necessary to meet demand.

Indications are that the Sierra car has set the future pattern for all high-performance cars built in Europe, and possibly elsewhere, which actually carry the Ford badge – although this may not necessarily exclude the AC sports car to be launched in the early 1990s (Ford having bought the British sports car-maker late last year).

The two companies are likely soon to sign agreements under which Cosworth will develop high-performance engines for at least the new Fiesta, due next year, new Escort due in 1990/91, and possibly for larger Ford cars as well.

As with the Sierra, they are likely to emerge through Ford's Special Vehicle Engineering operations in the UK, under former racing driver Mr Rod Mansfield.

Set up at the end of the 1970s, SVE appears to have no direct equivalent in other manufacturers – it is not e competitions department, hnt it is charged with developing "image" cars like the XR Escort and Fiesta models. Ford did not think of it as a profit centre, but so, indirectly, it has proved: nearly ¼m extra sales are estimated to have been generated, nearly ten times more than expected.

Further Ford links promise even faster growth for Cosworth Engineering, founded by the respected engineer, Dr Keith Duckworth, its chairman, and which is now part of the UEI electronics group.

Turnover reached over £30m last year, about double the level of two years earlier.

Much of that growth has come from an aluminium foundry operation set up in Worcester by several years ago, employing a Cosworth-developed process capable of creating castings of great complexity with great accuracy and a low finishing requirement.

Mr Bob Smith, the plant's managing director, points to several contributing factors to why, for example, it produces the complicated cylinder 16-valve cylinder head for Mercedes 2.3-16 high performance model; the use only of pure (not reclaimed) alloys; and the use of rare Zircon sand for the moulds themselves.

The process itself draws from the centre of the molten mass, thus allowing impurities to sink or "swim" in the furnace before gently filling the mould from below using a computerised electro-magnetic pump "borrowed" from the nuclear power industry. This avoids the porosity and oxidation problems of conventional casting techniques.

The process, now formally operated by Cosworth Castings, is patented and talks are said to be going on with several outside companies about replicating the foundry under licence.

Indicative of the process is that it provides a maximum tolerance of plus or minus 20-thousandths of an inch in any plane direct from the mould.

Cosworth has also been moving increasingly into the field of electronics. The electronic engine management unit, EEC IV, now fitted to North American Fords and a growing number of European ones was developed from e unit used on the latest Ford-Cosworth grand prix engine debuted in 1986.

And the engine itself has a significance extending well beyond the race track.

For in another portent of how automotive technology is expected to develop over the coming decades, it was designed to have direct spin-off into passenger car engines, and to be able to draw for its development on all Ford's resources in aerospace, electronics and new materials.

Thus, a pattern of collaboration and information exchange, already well-established between these disciplines, is set to be expanded for as far into the future as Ford and Cosworth care to see.

John Griffiths

GM and Hawtal Whiting

A half-British Buick

IN JANUARY, General Motors unveiled the Buick Reatta, a near-$30,000 sporting two-seater with more than a dash of luxury.

The troubled US giant hopes the car, which it describes as intended to create "virtually a new niche in the marketplace," will help burnish GM's somewhat tarnished product image.

Styled at GM Advanced Design in Warren, Michigan, its prototype development and other detailed engineering and manufacturing engineering were in *fact carried out in England.*

The Reatta is just one of a plethora of projects undertaken for GM by Hawtal Whiting, begun by a group of ex-Ford engineers in 1970 at Pitsea, Essex, not far from Ford's own headquarters and Dunton research centre.

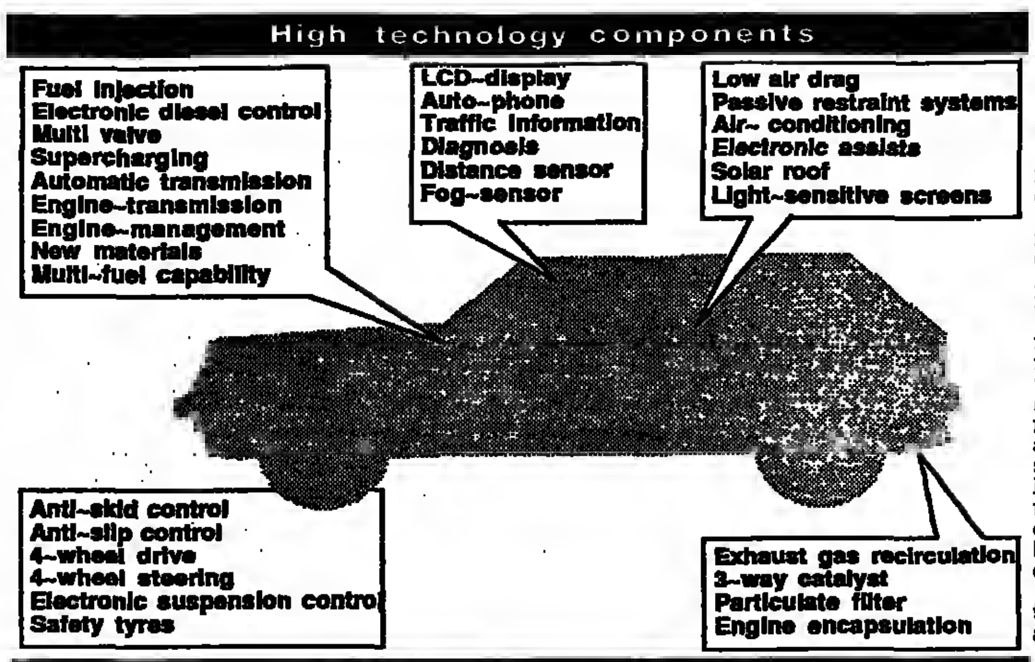
Since then, like Worthing-based rival International Automotive Design, it has grown to the point where it has several subsidiaries and employs nearly 1,000 in the UK, at Pitsea, Basildon, Leamington Spa and Swindon, while there are also subsidiaries in the US and Canada.

The name Hawtal Whiting means nothing other than that it comprises the front half of chairman John Whitecross's surname and other portions from those of the three colleagues with whom he started the business.

Although not involved in power train technology, HW has broadened its early dasign operations to cover design engineering, project management, structural analysis and die model manufacture. It has had contracts of up to three years' duration, taking a vehicle concept through from basic clay model to the threshold of voluma production.

The activities have turned it into a £30m a year turnover concern – although one not without its problems.

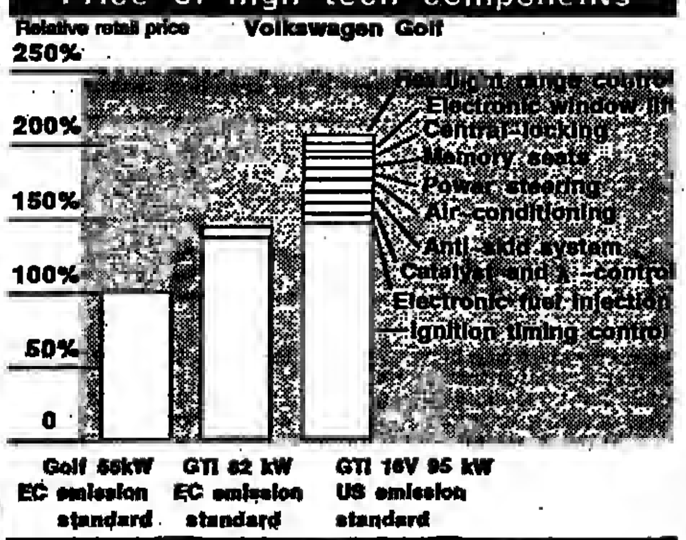
High technology components



Its exceptionally heavy reliance for business on General Motors – over 90 per cent until relatively recently – has meant declining profitability as the dollar has weakened.

Mr Whitecross and his colleagues have worked hard to hroaden the client base, with some success – Ford, Jaguar, *Matra of France and Rolls-Royce* now being listed among its clients.

Price of high tech components



Anglo-American luxury: the new Buick Reatta costs nearly $30,000

And late last year, it looked as if HW would become part of a more prominent consultancy grouping through a planned merger with First Security Group, e design and technical services provider to a wide range of motor industry customers as well as to security and fire protection industries.

FSG's rationale for what, in effect, would have been e take-*over of HW, was closely* linked to its view of how vehicle producers would approach their own business in future. The trend to source more and more of the design and developmant from outside consultancies would, FSG felt, leave the enlarged group well positioned to take advantage of the greater opportunities implicit for on-the-ball consultancies and component suppliers.

At the very last moment, FSG pulled out for reasons which it never fully made clear, although the move followed soon after the publication of half-year results by HW which showed that the weak dollar was continuing to have an impact on profitability.

Such has been the growth of HW's reputation in the US, however, that it has become a specific target for a number of domestic US rivals. One, SDRC Automotive Services, drew together a consortium of companies under the generic "Team 2000" aimed at providing a broad spread of consultancy services.

"We'll be comparable to a 'local' Hawtal Whiting," its leaders declared at the Team 2000 launch.

HW has invested heavily in electronic and other equipment to provide a creative approach to the business.

Several million pounds has gone into its computer design systems and more into highly-sophisticated measurement and photographic systems.

Tennant Panels, a self-contained subsidiary, supplies the group with metal-working skills for prototype prodnction. HW Structures undertakes structural analysis using finite element techniques and HW Die Aids specialises in soft tooling, project planning, clay modelling, plastic moulding and other activities.

As with any consultancy wishing to stay in the business long-term, it undertakes research in its own right.

For example, the Structures subsidiary currently is focusing heavily on research into vehicle impacts. Its computer modelling on the snbject is going well beyond predictions of the behaviour of the vehicle itself in e crash to embrace modelling of human occupants and their response to impact.

Such analysis can be used to minimise crash testing by manufacturers in order to meet legislative standards, as these standards are derived from a mathematical combination of acceleration level and time measured on an occupant's head. Normally measured physically through the use of crash rigs and dummies, the measurements can be obtained equally well by mathematical simulation.

It is not just the motor industry which is interested in this aspect of HW's activities:

■ *With legislation also looming* for post-crash survivability within aircraft, HW has acquired Civil Aviation Authority approval for the analysis of aerospace structures. The advantages should be fairly obvious: vehicle makers find crash-testing vehicles expensive enough. But airliners..?

■ HW is also working with a number of UK companies on researching improved build processes for cars, with a strong emphasis on modular assembly. The edvantages of modular assembly, HW executives point out, have long been known to vehicle makers. The trouble is, the differing assembly facilities needed for module-based production mean making production plant redundant, "and manufacturers won't throw stuff away."

This is one of the main reasons why GM's Saturn compact car project, aimed at beating the Japanese et their own game in terms of costs and product quality, had to be greenfield site-based, argues Mr Whitecross.

For as one senior HW engineer puts it, current conventional assembly lines, whare interior trim and other detail fitments are installed at the final stages "are a bit like trying to put your underpants on while already wearing your overcoat."

John Griffiths

John Griffiths profiles International Automotive Design

Awards bloom in hot-house

FEROCIOUSLY red-bearded and unsmiling, Mr John Shute nevertheless is reported by those who know him well to possess a sense of humour.

Usually, however, it remains buried under a complex mass of business concerns to which Mr Shute gives total and utter priority.

The relentlessness with which the former Vauxhall/Bedford engineering-draftsman has pursued the development of *International Automotive Design* (IAD) from a four-man band 12 years ago into one of the world's biggest design engineering consultancies has won the respect, if not affection, of most with whom Shute has come into contact.

It has been a development pursued with near-puritanical zeal in its literal sense.

IAD's accounts show modest emoluments indeed for the chairman and chief executive who drives the business – and an endless ploughing-back into further growth all that the business earns.

Investment in computer-aided design systems alone has reached £5m. And IAD's neighbours on its home industrial estate in Worthing have watched over the years with bemusement as it has spread from its ona initial small building, to three, then five, then half a dozen to the point where it dominates the estate.

Turnover, at £38m last year, is nearly 300 times IAD'a first-year level of £140,000. The company now provides jobs for over 900. No one doubts that the 1,000 mark will be reached soon.

Unquestionably, Shute and his wife, who control the company between them, could follow the example of March Group and float a part of the company on the Unlisted Securities Market with a high measure of success. They have thought about – and rejected – such a move.

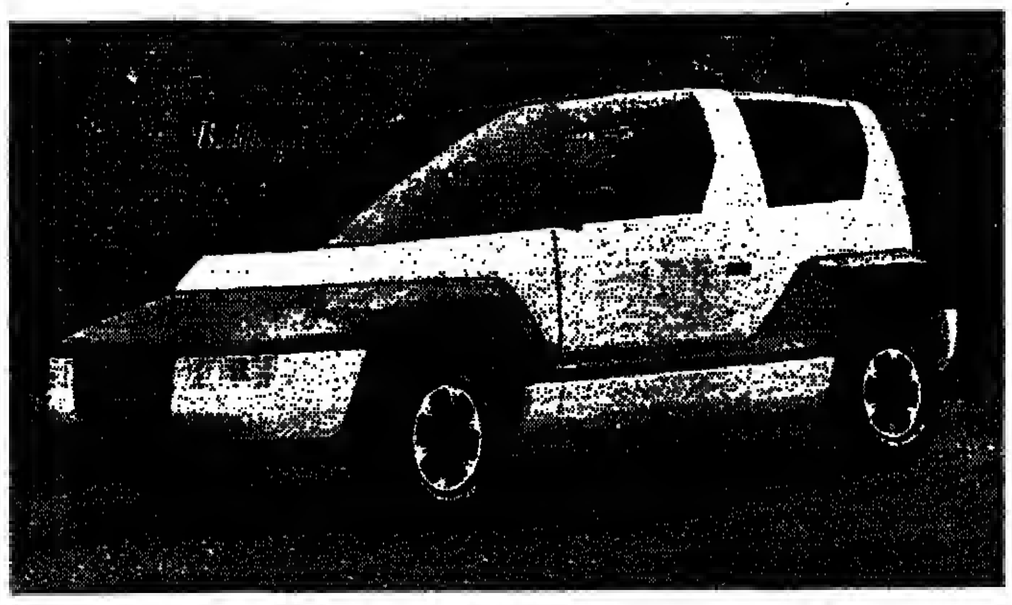
John Shute can see no attraction in working less hard or, more crucially, having to answer to others for the conduct of tha company which, basically, is his creation.

Like AVL of Austria, IAD rejects all suggestions that its rapid growth might have been based mainly on being simply an extra arm for a vehicle maker's design department – what used to be known in the trade as "rent-a-pencil" until CAD screens came along.

Mr Shute can point to plenty of evidence to justify the claim.

For example, at the Frankfurt motor show last year, IAD unveiled two concept cars of a sophistication which raised many motor industry eyebrows. Unlike many concept cars one, tbe Impact, was complete mechanically and fully drivable. The other, the Interstate, was non-mobile.

Impact, broadly definable as a leisure/utility vehicle and utilising four-wheel-drive, incorporates many of the features which IAD believes should be on production lines now, rather than too far into the future.



Unlike many concept cars, the Impact was complete mechanically and fully drivable

The fact that Impact uses a Ford Sierra floorpan and drivetrain is no adverse reflection on IAD, for unlike Ricardo or AVL its concerns are primarily with vehicle body design, engineering and styling.

Such is the detailed nature of the the development of Impact that IAD has been seeking, although so far without success, to sell the package to a North American vehicle producer. It is sufficiently flexible for any one of a number of makers simply to mate the concept to their individual mechanical parts, according to IAD. Its specification includes under-floor luggage apaca accessed via electrically-operated doors, radical, low-drag styling for an off-road vehicle and a new type of high-power lighting system of polyellipsoid shape.

Neither vehicle, however, is as radical as the first concept 'car' really to thrust IAD into the limelight, the extraordinary 'Alien'. This, unveiled more than two years ago as a "modern, compact two-seater sports car for the 1990s" was an extraordinary-appearing device, with its power plant and transmission carried within a rear-mounted 'pod' visually almost completely separate from the tear-shaped passenger compartment.

With approaching 600 design engineers on its payroll, many of whom at any one time are actually working overseas, it should not be suprising that Mr Shute and his colleagues now number most of the world's car makers on their client list.

It might be good for the motor trade balance of payments, but it gives Shute only guarded pleasure to be able to state that nearly 80 per cent of IAD's client list is foreign. It includes Saab, Opel, BMW, Audi, DAF, Mazda, Nissan, Isuzu and Subaru.

IAD's biggest customer is Ford US. Almost exactly three years ago, it set up a joint venture with a US counterpart – a subsidiary of CDI Corporation of Philadelphia – to form IAD Modern Design to exploit US potential more effectively.

IAD'a work in the UK has been confined, to date, to the up-market cars sector. It executed the Bentley 90 "prototype" unveiled at Geneva two years ago, to much interest and no chance whatever of production (the car was simply a way of grabbing some publicity for Rolls-Royce) and has worked for Jaguar and Rover as well.

Indeed, there is an undertone of bitterness in Mr Shute's views about the progress or otherwise of the UK motor industry since the 1960s.

For ha himself was on the receiving end of a decline bred by managements which, he feels, were usually concerned more with keeping shareholders happy in the short-term than investing adquately in the continuous design and development needed for the industry's long term health – and implemented with such devastating success by the Japanese.

It was a general failing of UK motor industry management for which many foreign producers were to become grateful. British car designers to this day have a particularly high reputation and the hundreds who fell redundant as tha UK industry declined became involved in a large-scale exodus.

"Body designers were ten a penny in the UK, but in short supply abroad," recalls Mr Shute. Now there are literally hundreds of British car designers working for all foreign car companies throughout the world – not a few of them at the very top, for example Mr Wayne Cherry, head of design at Adam Opel, General Motors' West German cars subsidiary.

Before starting IAD, Mr Shute's own career covered working for, among others, Chrysler, Ford and Porsche, sometimes on a freelance basis.

The professional status nf design engineers in the UK, he suggests, is still too low compared to that of their counterparts in just about every other vehicle-producing country.

Not, however, within IAD. Its hot-house atmosphere has led to the company being awarded two Queen's Awards for Exports Achievement. It was one of the four runners-up for the 1987 Business Enteprise Award sponsored by the Confederation of British Industry, Barclays Bank and Henley Management College (it being a reflection of British values, perhaps, that Bank of England Governor, Mr Robin Leigh-Pemberton, wound up presenting tba award to the Body Shop retail chain).

Some consolation is that it is a winner of Barclays' award as the fastest-growing "high-tech" company. In that sense at least, IAD has no major grumbles about "short-termism" in the City.

Ceramics

Going cool on radiators

AS ANY driver stuck in a traffic jam with a leaking radiator will tell you, a car's cooling system can be awkward, to say the least.

And for car designers and development engineers, the radiator is one of the least loved objects, too. It spoils the neat, box-like package that an engine could be; it requires air to pass through it, spoiling the aero-dynamics of the car; and its cooling fan drains power away.

So any means of dispensing with the need for radiators is eagerly pursued. Furthermore, any material whicb appeared to enhance the performance of the engine would quickly find its way out of the research labs and on to production engines – or so it seemed.

In the mid-to-late 1970s, a gronp of materials seemed to offer the answer. Ceramics had hard-wearing and insulating properties which seemed capable of working at the high temperatures at the surface of the combustion chamber – about 800 degrees centigrade.

By using ceramics, engineers hoped to do away with most of the cooling system. The research was spurred on by the US military which was anxious to eliminate the "Achilles heel" in any tank. In the Vietnam war, for example, tbe Americans estimated that 80 per cent of their vehicla battlefield damage was to cooling systems.

"Some of the wild euphoria has now given way to more healthy realism," comments Dr Alec Parker, managing director of T & N Technology. (He was managing director of AE Developments, the research arm of the AE Group which was bought by T & N in an acrimonious takeover). Mr Parker is also chairman of the Government-sponsored Consortium on Ceramic Applications in Reciprocating Engines, (CARE).

He rules out as "fantasy" the early optimism on possible development of a ceramic engine in volume production. He recognises that the Japanese car company, Isuzu, has a ceramic engine installed in a test vehicle, but he believes that ceramic materials will be limited to smaller, albeit important, components in the ordinary engine – "a distinct benefit has to be obtained," he says.

Mr John McClelland, chief engineer at Ricardo Consulting Engineers, agrees and adds that the disadvantages outweigh the advantages of using ceramics in major engine components. This is because ceramics may raise the thermal efficiency of the engine, but they also reduce the volumetric efficiency.

Mr McClelland further points out that ceramics had most to offer the diesel engine which is already fairly efficient. Using ceramics on petrol engines would raise temperatures to the point where the air-fuel mix would ignite too readily.

Instead, Mr Parker identifies four areas where ceramics will make headway in coming year:

■ First, ceramic parts will often be lighter than their steel counterparts. So ceramic valves, for example, will have less inertia and friction and will need lighter valve springs. That, in turn, means better engine performance because the valves have to perform at high speeds.

■ Second, ceramics wear less easily so their use could make sense where lubrication is difficult. Ceramic cams to operate the valves may be a case in point. Mr Parker estimates that ceramics could last three times as long as steel in such a situation.

■ Third, ceramic rotors are already used in some Japanese turbo-chargers and this application will become more widespread. The rotors are light and boost power in the engine more quickly, reducing "turbo lage." Failure of a ceramic rotor is less catastrophic than with steel, too, as ceramics tend to crumble while steel flies into splinters and needs to be well contained to prevent damage to the car or occupants. Producing these rotors is also giving companies valuable production experience.

■ Fourth, insulation properties will be developed for both more power and to reduce radiator size. Porsche usea ceramic exhaust port liners to keep exhaust gases hot as they pass from tha engine to the turbocharger; hot gases contain more energy. Mr McClelland estimates that about 25 per cent of the heat which passes into the cooling system stems from the exhaust port.

But several difficulties remain. Bonding the ceramic to metal is awkward: the ceramic cracks easily. When the metal expands faster under heat, the ceramic may fail. Mr Parker suggests that one solution is to cast metal parts around the ceramic material when possible.

For example, silicone nitride could be cast into an aluminium rocker-arm where the rocker comes into contact with the valve gear, an area of high wear. The ceramic would be compressed by the contraction of the aluminium when it cools which would be advantageous as ceramics are strong under compression. Alternatively, the entire rocker could be made of a ceramic – "but there are no magic jointing compounds," adds Mr Parker.

Cost, too, has to be carefully assessed. The materials are not necessarily expensive, but the quality-control is often costly. The turbo-charger production in ceramics had, at first, a scrap rate of about 77 per cent. This scrap rate has now fallen to about 30 per cent and unit costs will fall as volumes rise.

Costs can also be offset by producing a part which is more efficient than its metal equivalent or which removes a more serious design problem.

But ceramics and metal parts can ba used anccessfully together, as shown by the spark plug. However, there is mnch more research needed. The CARE programme has 13 projects with 28 UK companies participating.

About £5m has been provided for research so far, with jnst under half coming from the *Department of Trade and Industry* and the rest from industry. There is provision to spend another £1m if more projects are agreed.

So far, Japanese industry has a distinct lead in the field, thanks to much larger research programmes. Mr Parker says this partly because Japanese financial institutions are more willing to fund long-term research.

Furthermore, the Japanese are simply more adventurous about putting new technology into production – "there has to be some concern in Europe about the Japanese lead in this sector," he says.

Chris Barrie

Profile: Ricardo Consulting Engineers

A long view of transmission

IN THE minds of many in the motor industry, Ricardo Consulting Engineers, based on the south coast of England, is synonymous historically with the diesel engine.

Not without reason: its fonnder, Sir Harry Ricardo'e best-known contribution to the car was the inlet/pre-combustion mixing chamber design whicb eventually opened the way to the small, higb speed diesels whicb have been commanding a growing share of the West European new car market.

But diesels now account for less than half of the engineering consultancy work Ricardo undertakes for more than 100 vehicle producers and other manufacturers around the world.

Petrol and other engines now account for more of Ricardo's turnover, while like its close counterpart in Austria, AVL, it devotes fully 15 per cent of revenues to its own in-house researcb activities, for some of which Ricardo sees substantial commercial opportunities over the coming years. The self-funded research itself is conducted on what Ricardo likes to describe as a split basis – "90 per cent organisation, 10 per cent anarchy" – the latter to allow for and encourage unexpected breakthroughs by its researchers.

No better illustration of Ricardo's broadened approach can be provided than its unveiling to this year'a Society of Automotive Engineers congress in the US of a new transmission concept developed on its own behalf.

Ricardo believes its move into transmissions is an entirely logical extension of its engines business. For it predicts that in the 1990s the transmission, engina and other driveline components increasingly will be seen as a single, integrated unit.

Clearly, from this should derive further consultancy opportunities, while Ricardo is also looking at ways of shortening the design-to-production cycle.

The research is not confined to Ricardo's many CAD screens, but is already in the form of prototype hardware.

It takes the form of two basic concepts,described as the Automatic Layahaft Transmission (ALT) and the Ricardo Advanced Powertrain Management System (APMS).

ALT is based on the use of layshaft-type gearing with power-shifting undertaken by multi-plate wet clutches. The essence of the system is light weight and simplicity, although the transmission can be made suitable for a wide range of vehicle sizes from small cars to trucks or buses.

As Ricardo readily acknowledges, the concept follows on from various patents arising from tha Maxwell bus transmission introduced in 1981.

Several hundred Maxwell units are already in use, for which fuel consumption savings of 18 per cent compared with conventional hydraulic automatic transmission systems

The first application being developed by Ricardo is for a light car.

The five-speed unit,designed to be built at low cost and being fitted to a 1.1 litre car for development, is claimed to be a viable alternative to the stepless, continnously variable transmission (CVT) already introdnced on small cars by Ford, Fiat and Subaru of Japan, when it is allied to electronic power train management.

Comparable in size and weight to a modern manual gearbox, its use of a wet clutch eliminates the need for a plate clutch and housing.

The APMS is the intended means of achieving this, through the matching of the transmission to engine in a way which will allow the engine to operate as frequently as possible at optimum speeds for efficiency.

As a means of enhancing its tranemission capabilities, Ricardo last summer acquired Tuck Engineering of Carmel, Indiana, to form a new subsidiary, Ricardo-Tuck. Tuck has long-standing consultancy engineering experience in precisely the fields Ricardo is seeking to develop further, in addition to which the acquisition for the first time gives Ricardo a solid physical presence in the US, which is seen as an increasingly valuable market.

The broadening also includes the recent formation of a new group to develop and apply computational fluid dynamics to engines. It is as complex as it sounds,involving the application of software-based numerical methods to solving the fundamental differential equations which govern fluid motions.

Within it is contained, for the future, the means fully to understand the nature of the combustion processes as the pressures mount,inexorably, for ever environmentally cleaner engines to be developed in parallel with higher, yet more economical, performance.

John Griffiths

Planning Research and Systems

Encyclopaedia meccanica

SITED, slightly incongruously, just off London's bustling Piccadilly is a set of offices where numbers collected from all parts of the world's motor industry get crunched very finely indeed.

The offices are the principal home of Planning Research and Systems – it has others in Tokyo and the US – which began consultancy life in a modest way in 1970.

Some 18 years later its activities have broadened well beyond its early pre-occnpations witb diesel engines to embrace database development, specialist publishing, and product, marketing and acquisitions strategy consulting assignments for at least 70 of the world'e better-known vehicle and engine manufacturers.

That this has been possible is due largely to the recognition some 10 years ago of what appeared to be a lack of readily available detailed data about what precisely was being manufactured by wbom, wbere, in what volumes and how the type of prodnct was changing over time.

While vehicle makers themselves inevitably maintain large amounts of data in-house about their own activities and rivals, what chief executive John Martin, pnblishing director Simon Cannon and their colleagues had in mind was something different – a computerised "encyclopaedia meccanica."

Having concentrated initially on the European industry, PRS in the past four years in particular has spent more than pounds 1.5m expanding the databases to cover the Japanese and North American production and markets, and to break down major components into ever finer detail. By, for example, establishing over several years precisely what engines have been prodnced, by what manufacturers, in what size, whether they were carburetted, fuel-injected, and if so of what type and supplied by whom – whether they were turbocharged, supercharged or naturally aspirated, or even whether half-way through an engine's life there was a change of carburetter supplier – all such factors have been introdnced into the databases.

There are straightforward commercial applications, for example *helping component makers to* identify both opportunities for themselves and weak spots among rivals, and vehicle makers identify geographic production structures.

But, as Simon Cannon points out, the databases have provided also the foundations for technology tracking and trend forecasting.

A few weeks ago, their latest use emerged in the form of "Automotive Powertrain in Western Europe," analysing power train component consumption in the region's car industry and projecting trends into the 1990s.

These include: a softening in demand for diesel cars, despite recent fast growth, as it has become clear that meeting strict new exhaust pollutants standards is not going to prove a heavy cost burden for petrol-powered cars; the turbocharging of 50 per cent of all car diesel production by 1991; the turbocharger giving way to multi-valve engine cylinder heads as the favoured means of increasing petrol engine performance, to the extent that they will reach 20 per cent of all car engine production by 1991.

The turbocharger would then be confined to very higb performance units, in conjunction with turbocharging.

Use of carburetters, applied to 78 per cent of car engines in 1982, to have declined to 20 per cent of by 1991, replaced by multi-point fuel injection, rather than the lesa sophisticated single-point system widely adopted in North America.

Further rapid growth in electronic engine management systems. According to PRS, some form of engine management was fitted to 3.3m European engincs in 1986. This increased by 30 per cent last year, to achieve market penetration of 36 per cent. By 1991, PRS predicts, penetration will have reached 70 per cent.

This year, too, the consultancy has followed up its annual World Diesel Engine Digest, the industry's standard reference work, with a much hroader-baaed +World Automotive Digest+, in which it has sought to povide a yearbook on the world industry embracing car and commercial vehicle production,registrations and trade flows+business analysis of vehicle makers and their inter-relations, as well as technology trends and developments.

John Griffiths

Research intensifies in automotive electronics

New materials and products are being combined to provide *tougher, smaller electrical* interconnection systems for tha car of tha futura.

With warranty periods for soma electrical/electronic systems now in excess of three years – and with 10 years being seriously proposed – equipment is expected to reliably perform when exposed to high and low temperatures, water, salt, fuels and many othar contaminants as well as electromagnetic interference.

In the quest for more advanced systems, a researcher (above) at Raychem uses a scanning electronic microscope to examine materials in three dimensions. For over 30 years, tha group has researched and developed a wide range of products for tha motor industry.

The materials sciance company employs 10,000 people in 50 countries and has its corporate headquarters at Menlo Park, California. its European research centre is located in the UK at Swindon.

Profile: AVL, one of the world's largest independent automotive consultancies

An unlikely cradle of engine technology

GRAZ, on the southern tip of Austria and a stone's throw from the Eastern bloc, is not an immediately obvious place to house a cradle of technology for the car and truck industries of the West.

Yet the location of AVL patently has proved no obstacle to its growth since it was founded by Professor Hans List in 1948.

Still in family hands, AVL is an independent research and development centre, mainly for internal combustion engines, which currently employs 968 at the Graz site itself and a further 150 in offices at key motor industry centres around the world.

Nearly half are engineers or in other ways professionally qualified, working and communicating using computer systems utilising more than 300 VDU screens.

That puts AVL among the largest automotive engineering consultancies in the world, although not in the same league as some North American operations.

This, however, does not concern Helmut List, Dipl.Ing., son of the founder and the company's president. Such North American operations depend heavily for their turnover on relatively uncomplicated engineering or design contracts from vehicle producers, who often see such companies as 'load levellers' for their own engineering departments.

Herr List and his colleagues make clear, in a restrained manner, that they in no way regard AVL as a "rent-a-screen" operation – an assertion seemingly borne out by AVL's regular commitment of 15 per cent of turnover to its own raw research, unlinked to any specific client contract.

AVL's long history has produced a situation in which hardly a vehicle manufacturer in the world has not had an engine conceived or further developed by the company. When locomotive, marine and industrial engines – some of up to 8,000kw – are included the total runs to over 400.

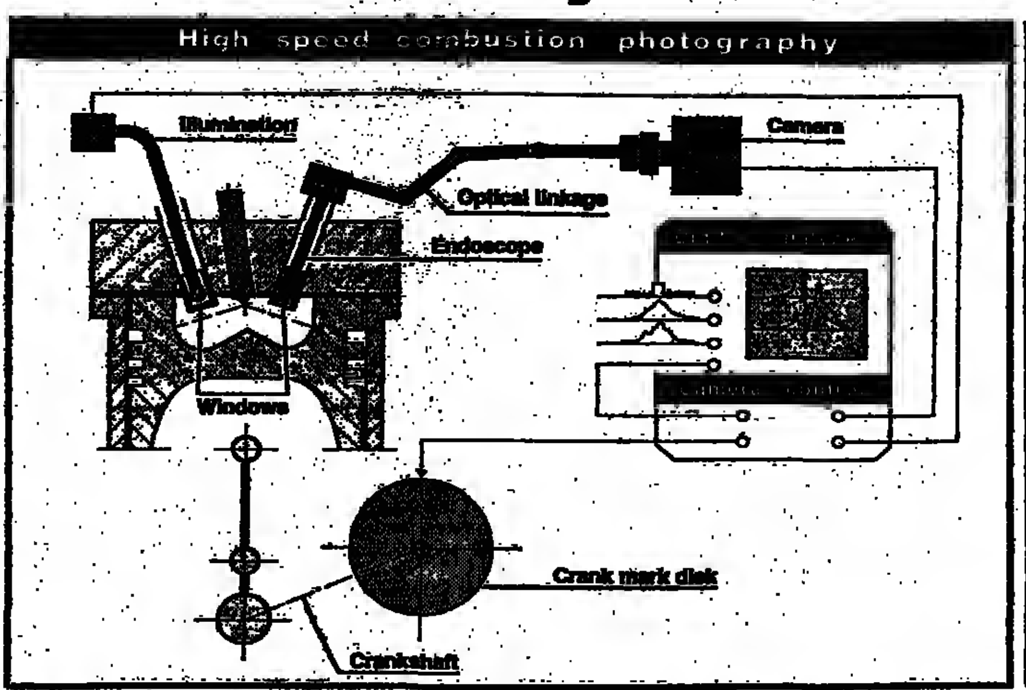
The commercial confidentiality rules which govern all consultancy work preclude a list. But just one example which AVL *can* quote, the world's first high-speed direct injection diesel engine fitted to Ford's Transit van, was conceived in Graz.

AVL is quite content to take a briefing from a manufacturer on what it wants to achieve with a certain vehicle or range of vehicles – and develop an engine from scratch for it right through to manufacturing working prototypes.

"What is really important is that a car or truck maker should set out, in advance and great detail, what it is seeking," says Herr List. "Some do not. More suprisingly, even when a manufacturer thinks he knows what he wants, sometimes he does not automatically go out and seek alternative opinions on how an engine might be best approached.

"It is something I do not understand. Now, today, it can cost £2½bn to bring a new volume engine into production. Some manufacturers are prepared to spend that but not to research the engine itself properly in the first place – a procedure which requires, comparitively, less than peanuts. *Sometimes, I do not understand them.*"

Expansion has been such that there are now 46 seperate test beds for engine development, backed by laboratories specialising in a number of supportive applications. These include fuel injection systems, stress and noise analsysis and fluid dynamics.



Robot head measures engine noise levels

This highly-sensitive artificial head is used by AVL of Graz in Austria to measure noise levels of engines and vehicles, thus preparing the way for quieter, more comfortable journeys in the car of the future.

Many complex factors influence the way that human ears detect variable noise levels, but this system is able to record with computers and plotters a subjective impression of troublesome noises so that they can be analysed and reduced.

HIGH SPEED PHOTOGRAPHY: (left), this analytical system is used by AVL to produce 20,000 picture frames-per-second to reveal what is happening inside an engine's combustion chambers, using an endoscope and *transparent-faced engine valves. This equipment* also has new applications in the very different worlds of *medicine* and ballistics.

Analytical tools include 20,000 frames-per-second photography of what's happening inside combustion chambers, thanks to an endoscope system using transparent-faced engine valves. The system is AVL's own – one of many spin-offs from its instrumentation activities which now account for nearly half its turnover and which extend into the worlds of medicine and ballistics as well.

In what amounts to a partial role reversal, AVL also makes and sells its own engines to other manufacturers for research purposes – as well as engine test cells, pressure transducers and other diagnostic systems. It has also collaborated with Coman, Fiat's robotics subsidiary, to develop cold testing of production engines. Within 60 seconds of start-up from cold 20 or more checks are made automatically in addition to laser-based vibration analysis to detect faults in bearings or valve train.

And, at £750,000 a time, there is Isac:

Isac is a phenomenon - a disembodied driver of almost infinitely variable ability between imbecilic slowcoach and grand prix *pilote*;driving, along *an infinitely* variable highway, a vehicle the very weight, shape and size of which can be varied by the touch of a few buttons without Isac even bothering to stop.

The acronym is for Instrumentation, Simulation and Control. The initial design aim was to reproduce the emissions testing cycle normally run by a car with an actual driver on a rolling road dynamometer for measuring emission levels - but by using just the engine, festooned with sensors and connected to a crankshaft dynamometer.

The dynamometer, under computer control, can input resistances to the engine to simulate, for example, the vehicle travelling uphill (or even simulate downhill travel by reversing the dynamometer torque). At a control panel outside the test cell, the analyst can key in huge numbers of variables - such as differing drag factor, vehicle weight, temperature changes, differing transmission ranges and so on.

Meanwhile , of course, the engine's emissions are being closely analysed.

Developed originally as an in-house research tool, Isac has now been cloned ten times as visiting vehicle manufacturers have latched on to the fact that, given just one engine, Isac can tell them with a high degree of accuracy whether a car which is still several years from a production line will be capable of meeting exhaust emissions legislation.

Exhaust emissions, inevitably, are of major concern in AVL's research as legislation grows ever stricter. But other concerns, such as noise reduction, are also claiming increased attention and AVL has installed two anechoic chambers to cater to it.

Among the innovations which may reach the production from AVL's own research activities is the tangential cooling fan. On sight it appears to fall promptly into the category of being so obviously superior to a conventional, axial fan as to make one wonder why it has not been a standard fitment on all cars for the past two decades.

Roughly similar in shape and diameter to the cutting cylinder of a non-rotary lawn mower, it is mounted low down across the front of the car.The radiator can be laid flat beneath it, with the cooling air ejected downwards. Thermally more efficient than the conventional type, and possibly quieter, its main advantage is seen, however, as allowing car designers substantially to lower bonnet lines in their pursuit of greater aerodynamic efficiency.

AVL is also looking, on its own behalf, at encapsulation of diesel engines as a means of reducing subjective noise,and has at least one running prototype.Even the measure of noise itself is by no means as simple as it might appear. The old system of installing a a microphone in a car's interior to measure decibel levels is no longer good enough but requires subjective input, insist AVL engineers - thus the development of an acoustically correct artificial head to register it.

These, however, are just a few of the research projects going on at Graz and largely funded by AVL itself.

All contribute to what List sees as a fundamental role for AVL – "to challenge a client company's thinking and come up with alternative concepts." Nor is a client necessarily a vehicle maker. With car makers requiring much more design and innovation by their principal component suppliers, AVL is finding more and more business in the components sector itself – another development which bodes well for consultancy growth.

Long-established in the UK, under motor industry veteran Jack Read, and several other European centres, as well as in the US, AVL is now also seeking to tap the potential provided by the Japanese motor industry.

John Griffiths

Lotus view on 'active' suspension systems

Enthusiasm abounds

ACCORDING to Mr Peter Wright, technical director of Lotus Engineering, after driving a car with "active" suspension, "you return to your standard everyday model convinced that there is something wrong with the latter..."

"What I think is so satisfying about the Active programme is that people judge it as a piece of real technology and not merely display trickery...

"The moment you get into the vehicle you can tell it's the equivalent of having another 100 horsepower."

It is entirely understandable that Mr Wright, and General Motors-owned Lotus, should have such enthusiasm for a car suspension controlled by a computer, sensors and fast-working hydraulic rams so that it can "read" road surfaces and counteract irregularities – even lean the car into a corner if programmed that way.

For it is shaping up as one of the principal revenue-generators for Lotus' consultancy engineering activities for far into the future.

Although only Lotus' GM parent (still apparently sticking firmly to its commitment to Lotus' independence after buying the UK concern two years ago), Volvo and Chrysler have acknowledged that Lotus is developing "active" systems for them, at least half a dozen more companies are under contract.

Precisely *when* the cars utilising the system's potential to the full will appear, remains an open question. GM's next Corvette sports car is the most likely candidate, its high retail price allowing enough scope for the expense inherent in the hydraulic rams system to be absorbed.

The rams themselves hold the key to a *full "active" system, for* their need to be able to lift an individual wheel over a bump at speed, for example, to prevent road shock being transmitted into the interior requires reaction speeds measured in very small fractions of a second.

Achieving the desired response times, plus getting the size, durability and production costs of the rams down to economic levels is one of the main challenges being tackled by Moog-Lotus Systems, the joint company Lotus formed with the American components and electronic systems nearly two years ago. Lotus acknowledges that they are still some way off.

That has not prevented several Japanese manufacturers applying the "active" label to several of the cars they have introduced over the past year or so.

Their suspensions certainly use sensors at each wheel which react to road irregularities, steering inputs and sudden acceleration or deceleration to change the car's shock absorber setting. Thus, for example, the car would be helped to behave better in the hands of a "press-on" driver by the right-hand suspension automatically stiffening in a left-hand bend to limit rolling.

The crucial difference between this type of system, as also fitted to Ford's latest Lincoln Continental model - though without Ford itself claiming it is "active" – and Lotus, is that the electronic control is still only being applied to a conventional shock absorber which is essentially passive.

Yet Mr Wright and his colleagues are perfectly aware that, in the long-term, "active" suspension will be just one component system of the "intelligent" car of the future – integrated , under electronic management with active steering, anti-skid and traction controls, engine management and collision-avoidance systems.

However, Mr Tony Rudd, managing director of Lotus Engineering, suggests that the full significance of active suspension in engineering and manufacturing terms is not yet widely appreciated.

Because wheel movement would be reduced by the ram system, clearance around the wheels can be at least halved, ground clearance reduced and bonnet lines lowered, making it possible eventually to use racing car "ground effect" principles to suck the car on to the road aerodynamically and thus improve road-holding and safety.

Even more important, there would be no need for the conventional complex mass of wishbones, radius arms, struts, springs and shock absorbers that make up current suspension systems so the vehicle structure itself can become lighter, and simpler and cheaper to manufacture.

Taking such concepts to their logical conclusion, the engine and transmission could then become lighter and more economical. With the engine at the front and transmission placed at the rear, the suspension could then be attached directly to these vibrating masses and the actual passenger compartment thus left in active isolation not just from road shocks but from mechanically-induced vibration.

Even Mr Rudd, however, acknowledges that the year 2000 is likely to have passed before concept becomes reality.

With the financial umbrella now raised over Group Lotus by its giant US parent, which is backing a £57m expansion programme for the once resources-short sports car and engineering concern, Lotus is well placed to advance its research and development engineering over a wide front.

Many in the industry believe that it is the innovative engineering that was displayed by the small British group – which still employs less than 1,000 – reflected in its string of grand prix racing victories which attracted GM to it, rather than its actual car production.

Even so, Lotus plans to increase car output from less than 800 last year to more than 5,000 by 1992, following the launch of its all-new Elan two-seater next year.

And the Elan itself is expected to reveal that Lotus has plenty of tricks up its sleeve when it comes to addressing a problem becoming more urgent among car makers – how to transmit high horsepower outputs efficiently through front wheels that have to steer as well as drive.

John Griffiths

Electronic suspension: Ford's front-wheel-drive 1988 Lincoln Continental features a new suspension system combining the "boulevard ride" of large luxury saloons with the vehicle dynamics of high-performance cars. Depending on road and driving conditions, the system switches electronically from one mode to another.

Designers face complex challenges because the commercial risks for manufacturers today are so great, says **Chris Barrie**

Good design: a crucial factor in car sales success

THERE WAS a time when automotive design in Europe was positively discouraged by general design schools - and, to some extent, this attitude still lingers, according to industry observers.

This bias came largely from the Bauhaus and Ulm traditions of design education, which took the view that antomotive designers were really "stylists," says Mr Nigel Chapman, who is head of the department of transport design at the Royal College of Art in London.

The RCA trains between 10 and 12 designers a year, all post-graduates. The course was set up with vehicle companies in response to the shortage of good antomotive designers which arose from the anti-antomotive ethic which was prevalent in many design colleges in Europe.

Mr Chapman says that even today he has to advise some students outside the RCA to carry out their automotive projects in their own time while completing general industrial design courses.

Nowadays, however, young designers have an easier time finding appropriate training.

In the mid-1970s, the shortage of antomotive designers led to the RCA graduates being labelled "young whizz-kids" in the sector. There were job opportunities worldwide with high salaries.

Prospects now are changing. There may soon be too many antomotive designers – "we are reaching a predictable lavel of capacity in the traditional automotive studio. The need for new designers may be regulated now by retirement and natural wastage, nut by any axplosive demand," says Nigel Chapman.

Successfully designing a car, truck or bus is one of the most challenging tasks an industrial designer can choose, especially since the commercial risks for manufacturers are so great.

For example, when Ford launched the Sierra, the car's rounded shape was an innovation, but there were sales problems in the UK, one of Ford's most important markets. The setback allowed the more conventional Vauxhall Cavalier to make significant headway in the company-car market which had been dominated by the Sierra's predecessor, the Cortina.

"So, rather like Admiral Jellicoe, an auto designer is the only man who can lose a war in an afternoon," says a market analyst. "A wrongly-designed car becomes a marketing nightmare, following an investment of perhaps $1bn in factories and new production plant."

'Product-development personnel need more recognition...if we do not have an intelligent manufacturing design base, then we will be in trouble.

Such a design responsibility can be awesome, even when it is shared by a large team of designers.

In a drive for high design standards, Uwe Bahnsen, director of education at the Art Centre College of Design in Lucerne, Switzerland, makes discipline and right attitudes a high priority. He says:"We expect students to attend full day classes of six hours, and two and a half hours of academic studies thereafter. There is no laxity, like showing up at the start of the day and then drifting off."

Mr Bahnsen knows what industry needs from designers. For 28 years he was Ford of Europe's Vice President of Design. He recognisas that automotive design training can all too often become overly theoretical and philosophical.

"Theory is, of course, important to create a solid foundation and broad understanding," he says."But I find that many schools – and I cannot single out the UK in this – tend to be distant from design requirements. So when the student gets into an industrial environmernt, he suffers a culture shock and it can take him a long time before he is a contributory member of a team.

"When students graduate from here, I want them to be ready."

Young vehicle designers need to know far more than just how to draw well; they have to understand about manufacturing technology, new materials, structural requirements and motoring standards and legislation – "the more you know about thesa aspects, the more freedom you have to work within them," says Mr Bahnsen.

Some car designers see themselves as problem-solvers in the widest sense. For example, Mr Roy Axe, design director of Austin Rover, believes that it is his role to make sure a car is reliable. Designing a car is done in three stages, he says. First comes the need to lay down the basis of reliability. Then comes the problem of "adding the bits the customer wants." And the third task is to give the vehicle *individuality*.

At the RCA, Nigel Chapman strongly emphasises the need for drawing skills and creativity, for unless a designer skilfully puts his ideas on paper, he is useless.

Mr Chapman also stresses the need to design car interiors to very high standards because the driver will spend perhaps 30 seconds a day looking at the outside of the vehicle, compared to the many hours spent inside the vehicle.

He says that what counts in Britain "is the quest for developing creativity. One senior American designer said he found RAC graduates more thoughtful than the highly trained technical graduate from America. But then, the RCA student should be; *this* is a post-graduate course and the students spend two years blowing their minds in a wonderful way."

The RCA studios are crammed with models and sketches of advanced cars. One model, soon to go on public display, is a four-seater with children in the front but facing backwards to look at the parents. The car is driven by two large wheels, one at each end, with power being supplied through the road surface.

"If the mechanics of this were feasible today, then it wouldn't be the future," says Mr Chapman.

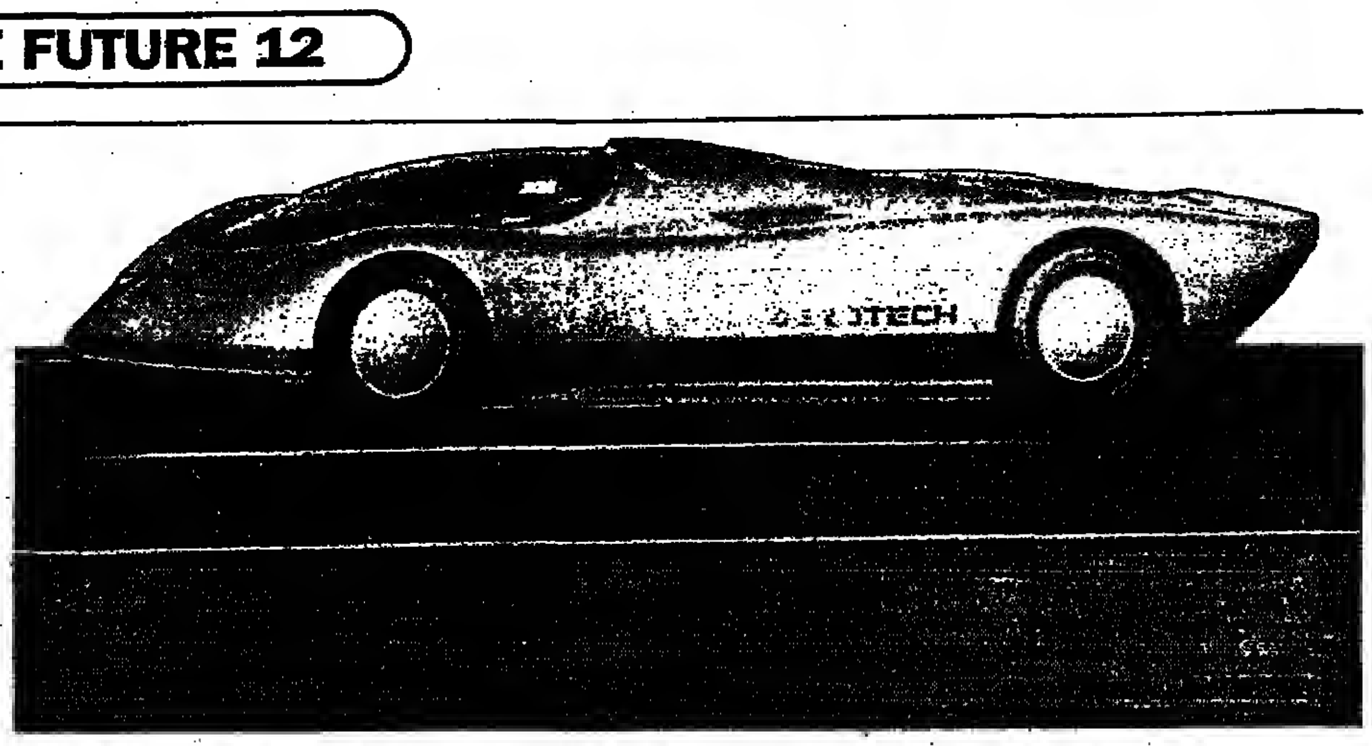
The future for British designers lies with automotive consultancies which help vehicle companies develop new products, often at short notice. According to Mr John Shute, chairman and managing director of International Automotive Design in Sussex, "consultants can even-out the peaks and troughs of demand made of designers, thanks to product cycles." By using consultants, car companies can keep minimum levels of product development personnel.

The growing strength of the consultancies is epitomised by the intended sale of facilities owned by General Motors to independent agencies. The Millbrook Test track is likely to be bought by Lotus for consultancy work while the truck and bus engineering facilities in Luton may go to JVB Designs.

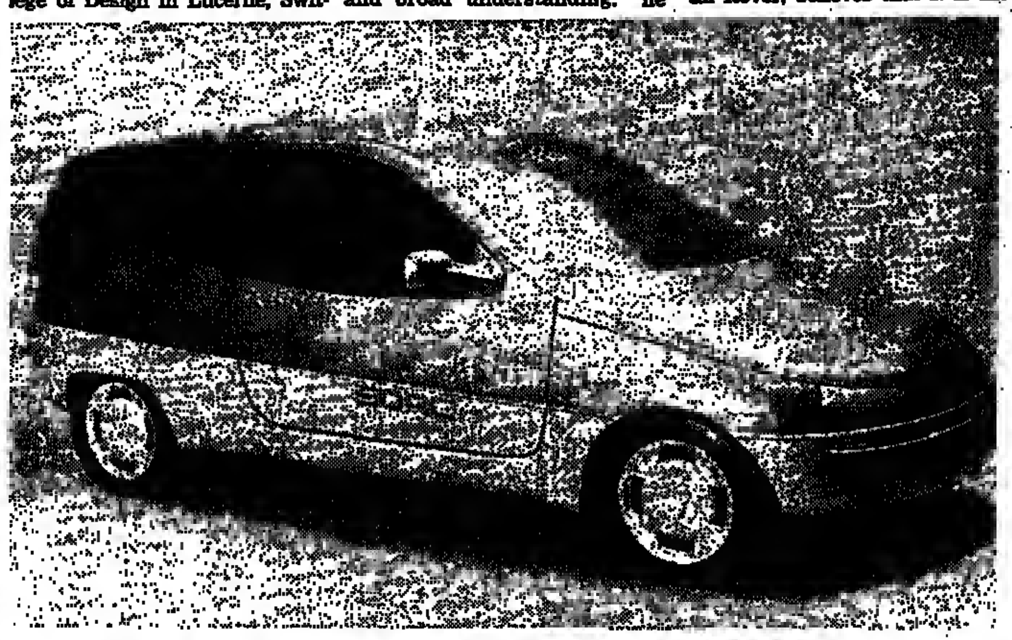
Many UK automotive designers spend some time working overseas. Like the motor industry itself, design is international. Ford sees its design capability as a "global resource" and it nses satellite links to employ designers from one region to work of projects being masterminded by studios in another region.

Yet Mr Bahnsen appears sad to see the disappearance of European design talent to far off countries. He adds: "There is insufficient recognition of design in the UK industry. That is why designers go abroad. Higher pay is not the key issue. British car designers can command higher salaries overseas."

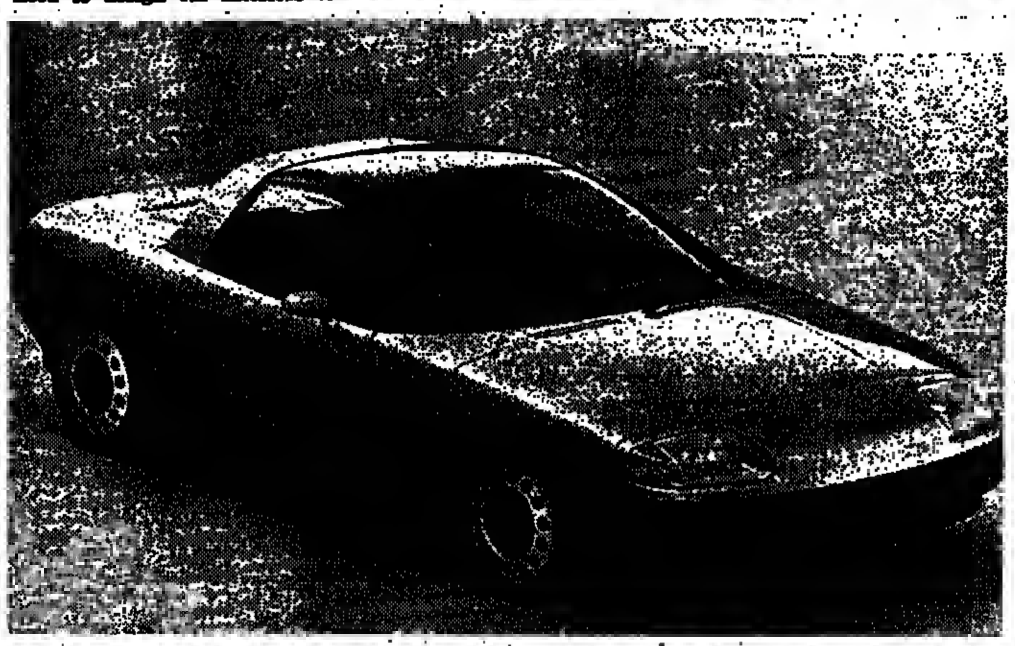
Mr Chapman goes further, however. He warns that "product development personnel need more recognition within their own country. If we do not have an intelligent manufacturing design base, then we will be in trouble."



General Motors' Oldsmobile Aerotech concept car, a "flying test-bed" for General Motors' new Quad 4 engine. The car itself will not go into production.



Tom Karen's Ogle Design consultancy carried out the styling and made the model for this concept car for computer software and engineering group SDRC. It is in the "supermini" category. Its purpose was to demonstrate that SDRC's capabilities extend to body structure concepts.



Mazda's MX-04 modular concept car is intended to demonstrate how the company intends to approach what it sees as a fundamental change rapidly approaching for the motor industry – a move from making relatively few models in high volumes to shorter runs of a variety of models to suit a cariety of market niches. It has a driveable base chassis, on which can be mounted a variety of plastic panels.

The test of intelligence

Continued from Page 1

ment is required, it could well make more sense for car makers to shun the in-house route if several vehicle makers' needs could be met from an independent supplier by using partly or fully standardised sub-assemblies.

This, obviously, would be particularly attractive to a carmaker where a particular technology subject to rapid and continual change is involved.

A theme running through all these changes, however, is the need for not just the vehicle and component makers to mesh more closely, hnt the components themselves.

For as Ford is making clear during a current UK lecture tour on the "intelligent" car, and as Dr Walzar and yet others in the industry stress: it is the compatibility of the individual electronic ingredients, and their ability to form complementary "expert systems" which, in the end, hold the key to the car of the 21st century.

"What we're looking for," according to Ford's Faraday lecturer, Mr Mike Westbrooke, "is total control over the whole driving process, from the piston to tha wheels – the bringing together of 'active' systems controlling the car's dynamic behaviour, 'engine management' route guidance and all other individual ingredients under one integrated control system.

"When that day arrives, so will have the intelligent car."

Inevitably, the plethora of concept cars unveiled in Tokyo last November, the introduction by Honda and Mazda of four-wheel-steering and other technologically-advanced features has sharpened debate on the relative position of the Western and Japanese industries in the race towards the intelligent car.

The compatability of electronics and the ability to form 'expert' systems, hold the key to car of the future

The jury is still out, and likely to remain so for several years yet.

No Western car, for example, is offered with four-wheel steering (4ws). Yet Audi developed une a decade ago, and General Motors has long had running prototypes. Both argue that they are by no means certain of 4ws cost-benefit value to customers. Prof Ulrich Seiffert, a senior Audi/VW executive who was himself head of research until last year, is scathing of what he sees as unco-ordinated "gimmicky" innovation by an industry which, he declares provocatively, is able to use docile domestic consumers as technology "guinea pigs" in a way that no Western company could do.

Given the precedents set by Japanese domination of other industries, only time will tell if such views are self-delusory.

Prof Seiffert confessed to being much more worried about Japanese production efficiencies – another factor to weigh heavily in the car of the future.

Fiat Auto's managing director, Mr Vittorio Ghidella, makes no bones abont his view that between the West and Japan lie two different production philosophies.

"The Japanese antomated in the 1970s and continue to place emphasis on efficient workers.

"Automation becomes necessary in Europe because our workers are freer and have other valnes than pure work. So automation is the right reaction."

Fiat is practicing what it preaches: the Tipo model which it launched in January is being built at Fiat's Cassino plant by the most automated processes in the world. It is assembled almost entirely by robots from 14 separately prodnced modules and even tested by robots when it rolls off the line.

It still requires a giant leap of the imagination, but no longer provokes total incredulity, to envisage "lights ont" manufacturing of almost an entire car some time in the 21st century.

In the meantime, Mr Karl Ludvigsen, the former Ford of Europe vice-president who now runs his own consultancy, with headquarters in London, suggests that there is yet one further way in which the European industry could cut costs substantially, against tha background of the EC's intention to dismantle internal barriers to trade in 1992.

This, he says, should open the way for manufacturers to share the expensive-to-prodnce platforms around which all cars are built and for which real economies of scale start at half-a-million units a year and above.

As Mr Ludvigsen points out, motorists would never know the difference.

Intelligent manufacturing?

SECTION IV

FINANCIAL TIMES SURVEY

Although surprisingly unaffected by the Gulf war, the Emirates are now much more concerned at its possible spread and the impact of Iranian propaganda. But, says **Michael Field**, current preoccupations also underline the need for evolution, long term, towards a modern nation state

The challenge of change

Sheikh Zayed bin Sultan al Nahyan, ruler of Abu Dhabi and President of the UAE, examining an Egyptian-built automatic rifle, presented to him by President Hosni Mubarak of Egypt, during his visit to Cairo earlier this month to cement ties between the two countries. UAE was the first Arab state to renew diplomatic relations with Egypt after last November's Arab summit in Amman.

United Arab Emirates

CONTENTS

ONE HAS very little sense in the United Arab Emirates of being close to a war. Occasionally in the last year walls of smoke have been visible off Dubai, when the Iraqis or Iranians have hit tankers near the coast, and a succession of rocket-damaged vessels is repaired in the state's drydock.

Otherwise, all seems normal. There have been no Iranian attacks on UAE territory as there have been on Kuwait, and no terrorist outrages. Dubai has a large Iranian immigrant population, does a large amount of trade with Iran, and handles several flights, full of shoppers, coming from Tehran or Shiraz every day. In both Dubai and Abu Dhabi, the atmosphere is one of continuing bustle and moderate prosperity.

Where the war has an effect is in people's minds. "It has taken the sleep out of our eyes," a Bahraini sheikh said recently. His words could go for the rulers of the UAE as well.

The war is felt to be more dangerous than it was a year ago. Iraqi attacks on tankers are happening closer to the mouth of the Gulf, and so Iranian reprisals are taking place in the same area. The American Nevy has arrived in the Gulf and the Russians are showing a growing interest in the region.

In the early years of the war, the Arabian peninsular states were happy to let two potentially hostile neighbours fight each other to e standstill; now they are afraid that "something might go wrong," and that they might become involved in the war themselves. They want the fighting to stop.

At the meeting in Riyadh last December of the Gulf Co-Operation Council, which groups Saudi Arabia, Kuwait, Bahrain, Qatar, the UAE and Oman, it was decided that Sheikh Zayed, the President of the UAE and ruler of Abu Dhabi, should take the lead in trying to improve relations with Iran.

Along with Oman, the UAE is the only GCC country that has full diplomatic relations with Iran. It not only has the advantages of Dubai's trade; it is further from the scene of the land conflict and has given mnch less support to Iraq than had Kuwait and Saudi Arabia. It also has a negligible population of Shia Moslems. The Shias, members of the unorthodox, mystical sect in Islam, are the establishment in Iran and the fact that Bahrain, Saudi Arabia and Knwait all have substantial Shia communities is an irritant in their relations with the Islamic Republic.

So far, there have been no obvious results from the UAE/GCC initiative, and it seems probable that Iran will concentrate on trying to divide the Emirates and Oman from the rest of the council – mainly through trying to develop separate discussions with the different members.

While the intermittent contacts continue, the UAE rulers worry about Iranian propaganda. Iran's broadcasts are beamed mainly at the northern Arabian states, but they can be listened to in the UAE and parts of their message could apply to that country. They accuse the rulers of extravagance, failure to promote people who are not members of their families, ineffectiveness over Palestine, and suppression of free speech.

Iranian influence has been behind the growth of fundamentalist Islamic sentiment in the region. This spread rapidly among the young in the UAE earlier in the 1980s, but now that people have become disenchanted with Iranian politics, it seems to be either static or waning. The reform societies, which propagate Islamic social practices, seem less active and, at the UAE university, the Islamic tendency is not as influential in the students' union as it nsed to be.

To encourage the ebbing of misguided zeal, the Ministry of Education has been weeding out teachers who have shown too great religious enthusiasm. A committee has been editing all text books to make them less Islamic; the revised versions should come into circulation at the beginning of the new academic year in the autumn.

Recently, an edict was reissued to remind preachers that they must have their sermons passed by the Ministry of Religious Endowments and then must not deviate from the approved texts.

To counter the direct Iranian threat and the possibility of subversive activity, Abu Dhabi and Dubai, like the other Arabian oil states, in the last two or three years have been channelling 40 to 50 per cent of their oil revenues to security and military spending.

Iran, the war and Islamic fundamentalism make up only one of two broad issues which preoccupy the people of the UAE at present; the other is the state of the federation itself.

In recent years, Abu Dhabi and Dubai have seemed to be going their separate ways. They have always pursued completely separate oil policies; Dubai refuses utterly to co-operate with any production allocation assigned to the UAE at meetings of the Organisation of Petroleum Exporting Countries, and it sells its oil at open-market prices. The same independence applies to military purchasing, although officially the forces in Abu Dhabi and Dubai are part of the same army.

Where the states have given the impression of greater independence recently has been in such matters as Dubai's creation of its own airline, Emirates Air, their different responses to the *coup d'état* in Sharjah last summer, and in the ill-will engendered hy Dubai's handling of some 90 per cent of the imports of the federation – which last year caused Abu Dhabi to announce that in future its own imports must come through its own port. This edict has not been enforced.

At the same time, the main federal institutions seem to have become weaker. Since Sheikh Rashid, the ruler of Dubai and Federal Prime Minister, became incapacitated by a series of strokes in the early 1980s, the Federation has lacked an official head of government and, without a strong person committed to promoting its interests, the federal government machine has gone into decline. Several Ministerial posts are vacant and are filled on a *de facto* basis by under secretaries.

In the last four years, the federal budgets have been announced late. In 1986 and 1987 there were no real budgets at all – just monthly grants to ministries based on their previous year's allocations, with the arrangement being given a certain formality in the publication of a budget near the end of the financial year.

Officially, the federal administration runs all aspects of government apart from Abu Dhabi's and Dubai's internal economic development, but, in practice, the two leeding Emirates now run all their own affairs and deduct the cost from their federal budget contributions.

As the Government has weakened, so have some of the federal agencies. The Emirates General Petroleum Corporation, which was formed in 1981 to take over most oil products' distribution in the northern states, is having its market position eaten into by the major oil companies, a Dubai Government joint venture and the Abu Dhabi National Oil Company.

The one federal institution which seems to increase in stature is the UAE university et Al Ain, in Eastern Abu Dhabi.

The problems of the federation cause much heud-wringing among the UAE middle classes. This section of society expands every year as more young people come out of high school and university. The young have beeu taught to regard themselves as citizens of the UAE and they look for greater unity among the Emirates and e more institutionalised system of government. In the Emirates north of Dubai, where there are not significant amounts of oil, a stronger federal government is also seen as a means of the states getting more money.

The middle classes snpport their rulers as individuals. Sheikh Zayed of Abu Dhabi is enormously respected and admired, and Sheikh Maktoum bin Rashid, the eldest son of the incapacitated ruler of Dubai, is increasingly popular. Maktoum has grown mnch in prestige in the last two or three years. He had the reputation for generosity, which is an important quality in the Middle East, and he is interesting himself more than he used to do in government.

What the bourgois intelligensia does not like is the system of government. It is not so much that its members object to the sheikhs heing privileged and powerful. It is more a matter of their no longer seeing themselves as clients or subjects of a few individuals and wanting, instead, to be citizens of a nation state. They argue that, while the traditional fragmented system of government continues, the UAE will never be strong. It will be unable to face a crisis.

These arguments are only partly valid.

Even if Abu Dhabi and Dubai have been going their own ways in recent years, they are flourishing, which makes calls for more co-ordinated policies seem pointless. Greater central control of their economies would probably stultify Dubai without benefiting Abn Dhabi.

In politics, the day-to-day individualism of the Emirates does not mean that the rulers cannot unite when they have to do so. Despite their different views on the issue, last summer they managed to act together to resolve the *coup d'état* in Sharjah, restoring the ruler to his post and appointing the man who tried to oust him as his deputy.

The sheikhs are mnch less upset than the middle classes by the different policies their Emirates pursue. They may quarrel but they understand each other and accept each other's prerogatives.

At a personal level, they are friends. Their relationships are developed by their continual meetings at camel races and other social events.

Where the complaints and anxieties of the bourgoisie may be justified is in the long term. Because the Emirates' system of government – and the system of government in other Arabian peninsular countries – does not seem able to evolve as society changes around it, it is slowly becoming less representative of its people.

In particular, it seems unable to accommodate elected or appointed national assemblies. Before its recent sessions, the Federal National Council of the UAE went for two years without being summoned, and, when members were appointed before the latest meetings, it was noticed that three of the most vocal personalities in the old council had beeu left out.

The issue of federal v state government in the UAE is part of the broad issue of the workings of Arabian peninsular government. For the time being, traditional government – state government in the UAE – works well, and the rulers are popular, but for the next decade the ruling families have to face the challenge of transferring the people's loyalty from themselves to the nation state.

Michael Field explains the background to last year's attempted coup d'etat in Sharjah and the political tensions which still remain

Federal rulers impose uneasy compromise

MUCH THE most dramatic and important event to have occurred in the UAE in the last 12 months is the attempted *coup d'état* in Sharjah last June. Although no blood was shed and a compromise between the ruler, Sheikh Sultan bin Mohammad al-Qassimi, and his brother, Abdul-Aziz, who had organised the coup was arranged in a matter of days, the problems that led to the coup have not been solved and the feeling in the Emirates is that the situation is unstable.

Of the protagonists in the coup, Sheikh Sultan at first sight is the model of a modern Gulf ruler. He has studied agriculture at Cairo University and received a doctorate from Exeter. In contrast, some of the other Gulf rulers are barely literate – literacy was not a very useful accomplishment in the society into which they were born but, as a group, they are wise and blessed with extraordinary memories and a flair for dealing with people.

Sultan bin Mohammad was made ruler of Sharjah in 1972, in preference to his elder brother Abdul-Aziz, precisely because his more modern qualifications seemed what Sharjah would be needing in the 1970s. The occasion of his succession was the aftermath of a short-lived, violent coup d'etat in which a cousin had murdered the senior member of his immediate family, Sheikh Khaled bin Mohammad, who had been ruler since 1966.

Since he became ruler, Sultan has enhanced his academic reputation in some quarters by writing a history book in which he represents his ancestors in the early 19th century as strugglers against the British and the forerunners of modern liberation movements. The more conventional version of events is that they were the pirates whose raids on India-bound shipping were the original cause of Britain's entering the Gulf.

What has made Sultan controversial with some of his own countrymen, however, is not his interpretation of history but the economic problem that has beset Sharjah under his rule. The State was unlucky in that its first small oilfield in the 1970s suffered a very rapid decline in output, which undermined Sultan's enterprising attempt to develop Sharjah as an exceptionally liberal off-shore business centre.

In the last four years Sharjah has suffered from the dispute over its lack of budget contributions to the Federation and the *Federal Ministry of Electricity's* failure to pay for the gas it has supplied. (see article below).

While this dispute has been in progress, the Sharjah Government has run up debts thought to total $1bn – which is much more than it would have received from its gas even if it had been paid. The economy of the Emirate has stagnated.

The business community has grown increasingly disenchanted with this poor performance. Not the least of the policies causing irritation was the ruler's banning of alcohol soon after developers had made a substantial investment in hotels. Sultan in recent years has been increasingly devout and his State is the only one in the UAE to be dry.

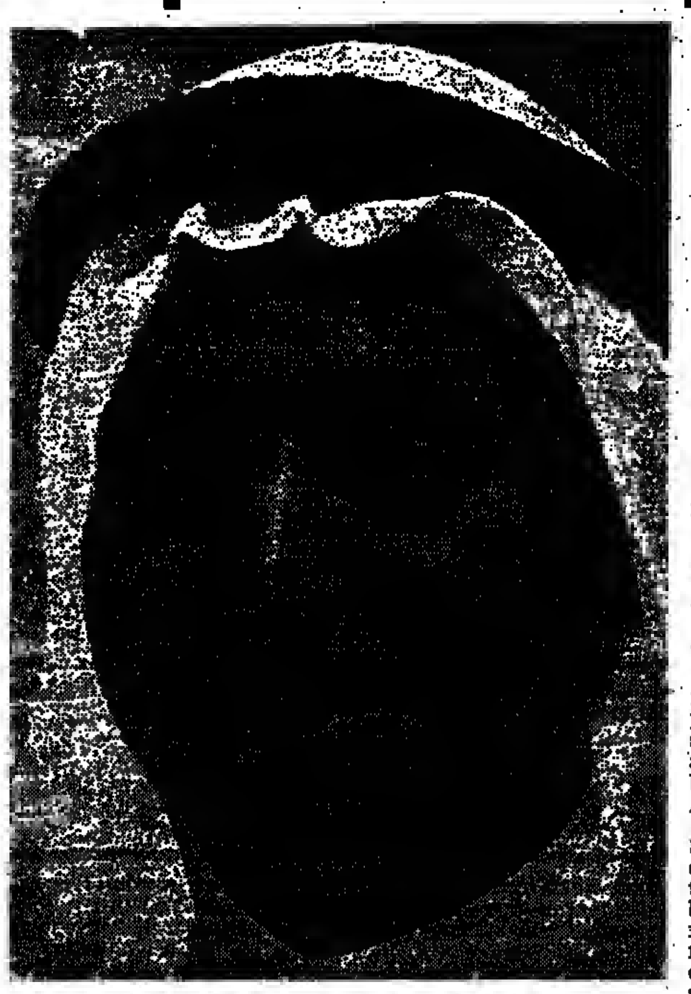
The man who tried to depose Sheikh Sultan last summer was his elder brother, Sheikh Abdul-Aziz, a person of a different stamp.

Abdul-Aziz is a soldier and a businessman, a widely respected member of the Qassimi family. He trained at Mons, the British Officers school and, before the UAE became independent in 1971, he served in the British-run defence force, the Trucial Oman Scouts. It was while he was in this unit that be became a friend of Sheikh Zayed, the ruler of Abu Dhabi.

In recent years Abdul-Aziz has been commander of Sharjah's Amiri Guard, a prominent businessman and President of his State's Chamber of Commerce.

The coup he mounted last year took place on the morning of June 16, when Sheikh Sultan was on holiday in Britain. Abdul-Aziz occupied the palace and the main Sharjah government offices with his troops. By the normal standards of coups it was a gentlemanly affair; no shots were fired, there were no arrests, and there was no interruption of communications between Sharjah and Dubai.

The first the other Emirates and the world outside heard of the events was the broadcast of a letter, *said to have been written* by Sheikh Sultan, in which the ruler said that in spite of his having tried to budget wisely people had exploited the system and so his State had run into difficulties. He added that *he* wanted to further his education at Exeter and so had decided to hand power to his brother, Abdul-Aziz.



Sheikh Sultan bin Mohammad al-Qassimi

There followed a reply from *Abdul-Aziz* in which he accepted the reins of government and thanked his brother for the good work he had done. In the days that followed Abdul-Aziz circulated in Sharjah *two statements* in which he detailed the parlous state of the Emirate's finances and outlined his proposals for improving them.

In the nine months that have followed these events, Sharjah has been quiet but the situation is not felt to be stable.

From the start, it was clear that Abu Dhabi and Dubai were divided in their response to the coup. Abu Dhabi's radio broadcast Abdul-Aziz's statements in full, Dubai's ignored them totally. *Immediately* there was speculation that Abu Dhabi was behind the coup, and this has continued since.

Certainly Abu Dhabi has reason to be *disenchanted* with Sultan. In the 1970s and early 1980s, Sultan received a great deal of financial help from Abu Dhabi – it is often said that Abu Dhabi's money built the Emirate – but since the region's oil revenues have fallen Abu Dhabi's help has declined.

Partly for this reason, Sheikh Sultan's relations with Sheikh Zayed of Abu Dhabi, the President of the Federation, have deteriorated. Early in 1987 at the Islamic summit in Kuwait, where he went as part of Sheikh Zayed's delegation, Sultan disagreed in public with the line being taken by his President. In his relations with foreign powers, Sultan has flirted with Iran. It is often said that he has an inflated sense of his own Emirate's importance.

To what extent these poor relations led Abu Dhabi to back Abdul-Aziz's coup is a matter of speculation. One school of thought suggests that Abu Dhabi was engaged actively in its planning, another that Abdul-Aziz approached the Abu Dhabi sheikhs, talked about his scheme and was told that if he could organise a transfer of power – by coercion or voluntary means – he would receive Abu Dhabi's blessing.

Given Sheikh Zayed's commitment to the Federation, his patience and his statesmanship, something towards the less active end of this range of possibilities, seems the more probable Abu Dhabi response.

Dubai's view of the coup and of Sheikh Sultan was the opposite of Abu Dhabi's. Although traditionally Dubai and Sharjah had been commercial and political rivals, since the early 1980s their relations have been good. A border dispute was settled amicably, a *few* years ago, and a gas contract, on terms favourable to Dubai, has been a major source of Sharjah's revenue.

When he heard of the coup, Sheikh Mohammad bin Rashid al Maktoum, the most assertive of the brothers who now run Dubai, flew home immediately from England, where he had gone for part of the flat racing season.

He then went with his brother, Hamdan, to Abu Dhabi and argued forcefully that the coup should be reversed. His contention was that any support for a *coup d'état* in any one Emirate was a dangerous game which might be copied elsewhere. The conspiracy, deposition and murder which stains the histories of the ruling families of the region, earlier this century, has made present members of the families preoccupied with legitimate succession.

Most of the members of the Federal Supreme Council, composed of the rulers of the seven UAE states, then gathered in the oasis of Al Ain in Abu Dhabi to work out a compromise. In this Sheikh Zayed took a leading role, responding to the urging of Saudi Arabia.

Sheikh Abdul-Aziz bin Mohammad, meanwhile, remained with his troops in Sharjah, while Sheikh Sultan, who had returned from England at the same time as Sheikh Mohammad bin Rashid, installed himself in Dubai, where he received well-wishers and assured everyone that he was still ruler. Those who saw him say he looked a very worried man. The two only went to Al Ain when a compromise had been agreed.

In essence it was decided that Sheikh *Sultan* should remain ruler of Sharjah and that Abdul-Aziz should be deputy ruler and Crown Prince.

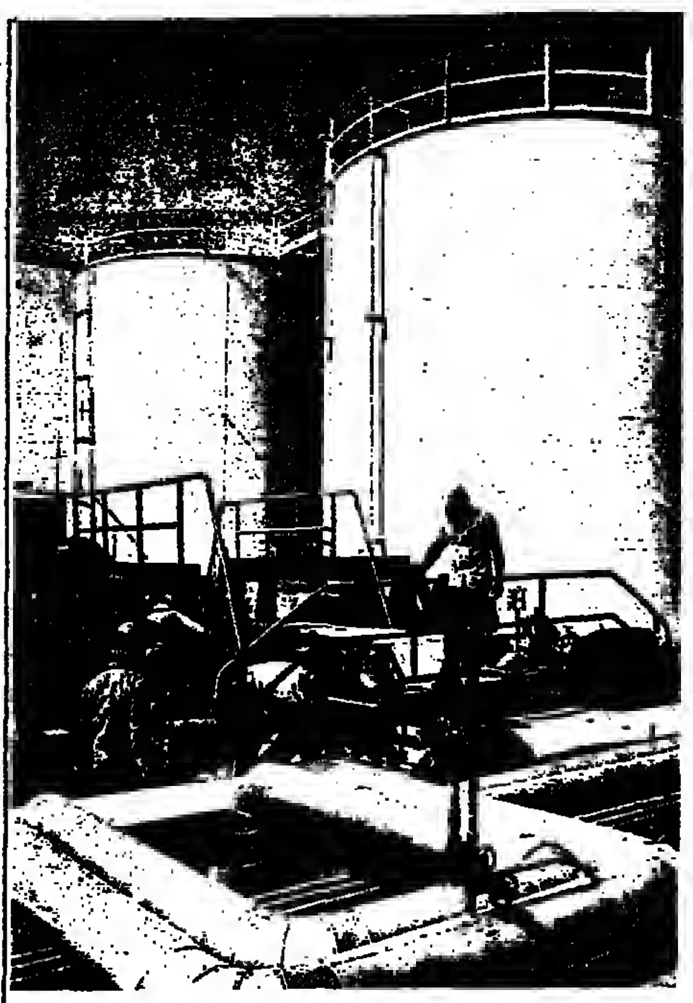
In the nine months that have followed these events, Sharjah *has been quiet but the situation* is not felt to be stable. Sheikh Sultan and Sheikh Abdul-Aziz are not talking to each other. The Amiri Guard has been transferred to the command of a *cousin, Sheikh Faisal, but* Abdul-Aziz still has retainers of his own.

It is assumed that if Abdul-Aziz can muster the support of the *other members of his family* he will force Sultan to step aside. For his part Sultan does not leave the Emirate.

The consensus in the UAE is that the episode cannot have strengthened the Federation and *this* is probably correct.

Yet last summer, the Supreme Council of Rulers met more times in a week than it had done in the *previous five years. The rulers* face an extremely difficult problem. They have worked out a compromise and imposed it on the people involved. Even if the Federation is not a tight unit, *with much control on its members* actions, in a day-to-day sense, what happened last summer shows that, in a crisis, the rulers still work together.

Michael Field



BP Middle East's new luboil blending and packaging plant at Jebel Ali Port, Dubai, constructed by the Costain Dubai company, a joint venture between Costain International and H E Humaid bin Drai. Project consultant was Ewbank Preece Process and Industrial Engineering

Oil production

Prices under pressure

SINCE THE begining of this year, Abu Dhabi has radically cut oil production. Last year, its output averaged 1.07m barrels a day, hitting a peak of 1.55m b/d in August. This year, so far, it has run at only 0.7m b/d.

The cut is not in response to any alteration in the quota for the UAE agreed by the Organisation of Petroleum Exporting Countries. At the Opec meeting last December, the UAE allocation remained unchanged at 0.948m b/d, out of a total for organisation members, excluding Iraq, of 15.06m b/d.

What has changed is the state of the market. With open market prices threatening to fall to around $14 in the spring, Abu Dhabi is now much more worried than it was last year about defending the Opec average price of $18.

While other members have been giving discounts, Abu Dhabi at present is sticking to official prices. But this policy is understood to be being debated in the Government and it may change at any moment.

Abu *Dhabi's willingness* to breach its production quota in last year's stronger market was caused by its exasperation with Dubai's long-standing refusal to co-operate with Opec.

Although it is technically the UAE as a whole, and not just Abu Dhabi that is a member of Opec and although Dr Mana Saeed al-Otaiba officially is the UAE Oil Minister, Dubai has *never taken its share agreed for* the UAE at Opec. If the UAE has complied with an Opec quota, the entire sacrifice has always been borne by Abu Dhabi.

Last year, Dubai was unmoved even by *visits of ministers from* other Opec countries – it maintains that its oil production is its own business.

Its output in 1987 ran at 380,000 b/d, the bulk of it being sold on the open market. Almost all of this comes from the Fatah group of offshore fields, operated by Conoco.

Onshore the Margam field, where the licensee is an Atlantic Richfield/Britoil company, produces about 17,000 b/d of very light crude or condensate.

In Opec terms the other northern emirates' production is insignificant. Sharjah, with its onshore partner Amoco, produces 45,000 b/d of condensate from the Sajaa field and about 6,000 b/d of oil from the offshore Mubarak field, which it shares with Iran. In its first year or so onstream, in the 1970s, Mubarak produced 80,000 b/d, but it is a difficult field and production rapidly declined.

The most northerly of the emirates, Ras al Khaimah produces 5,000 b/d of condensate from a profitable offshore field developed by Wintershall, Neste of Finland and the Overseas Petroleum Investment Corporation of Taiwan. Like much of the condensate produced in the UAE its output is sold to South Korea.

In only one northern UAE producing area are the large reserves. The Fatah fields are reckoned to contain about 2bn barrels; they perform well and should be good for another 20 years.

The Sajaa field in Sharjah may have 250m-300m barrels of recoverable condensate, mixed with gas in the ratio of one barrel to 10,000 cubic feet.

All of the other northern fields have minor reserves or are disappointing performers. The Margam field in Dubai was expensive to develop but is difficult to produce. Its gas is re-injected but does not stay in the reservoir.

The great bulk of the UAE's oil reserves are in Abu Dhabi. Onshore the main fields, Bu Hasa, Bab and Assab, are controlled by the Abu Dhabi National Oil Company and the Abu Dhabi Petroleum Company, the former concessionaire, which is owned by BP, Shell, Total, Exxon and Mobil. Offshore the Umm Shaif and Zakum fields are run by Abnoc with BP, Total and Japanese companies.

The traditional figure for the state's proven commercial recoverable reserves was 33bn barrels, but recently there have been big upwards revisions of reserves in other Opec states - particularly Iran, Iraq, Kuwait and Venezuela – and last year Abu Dhabi joined this trend. Its reserves estimates have been increased to 95bn barrels.

The fashion for upwards revision is partly politically motivated – states with large reserves can *claim* bigger Opec production quotas. The nominal justification comes from big recent improvements in production technology, which are making it possible worldwide to recover more than the traditional 30 per cent of the oil in place.

Michael Field

Sharjah gas dispute

A major problem

THE MAJOR problem of UAE politics – the government and finance of the emirate of Sharjah – revolves around the gas production of one hydrocarbon field, Sajaa.

In simple terms the problem is that the because Sharjah has not paid sufficient money into the federal treasury, the state's production partner, Amoco, has not been paid for gas deliveries to federally-run power stations and Amoco in turn has been unable to pay the Sharjah government its share of revenues.

The Sajaa field was discovered at the beginning of the 1980s, by Chicago-based Amoco. The field is operated by Amoco and until the end of January this year, when the Sharjah government bought a 60 per cent stake, the condensate and gas produced was owned entirely by the US company.

The 45,000 barrels a day of condensate is exported, being sold mostly to third parties, and the 500m cubic feet a day of gas is *delivered under separate contracts* to the Dubai Gas Company (Dugas), which takes rather more than half, and the Emirates General Petroleum Company (EGPC). The federal company in turn delivers a *minor* amount of gas to cement plants and the rest to the Ministry of Electricity, for power generation.

The terms of the contract are very different. Dubai, which has its own treatment plant and large supplies from its offshore fields, is happy to take unprocessed, sulphurous gas in whatever fluctuating quantities suit Amoco. EGPC's contract is the reverse – the gas has to be purified to a high standard and quantities are at EGPC's discretion.

The price of the Dubai contract, signed in May 1985, is $1.25 per million BTU and the EGPC contract, signed in 1982, is for $3.50 per million BTU. The consensus in the UAE oil industry is that Dubai's price does a bit more than reflect its tough terms; it may be slightly related to the set*tlement of a Sharjah/Dubai* border dispute that was agreed around the time it was signed.

From 1985 the price of the Dubai contract has rankled with the federal institutions.

Deliveries of gas to EGPC started in November 1983 and the dispute between the corporation and Amoco began soon afterwards. EGPC paid $2m-3m for sales of gas to cement plants, but has paid nothing at all for gas delivered to the Ministry of Electricity because it has not been paid itself. The reason is that the Sharjah state government, in the eyes of Abu Dhabi and the federal government, has not paid a proper amount of its revenues into the federal treasury, which has led them to treat its gas as a budgetary contribution.

To date, EGPC owes Amoco $640m plus interest – according to the American company. If this were paid 80 per cent would go to the Sharjah government in taxes and royalties.

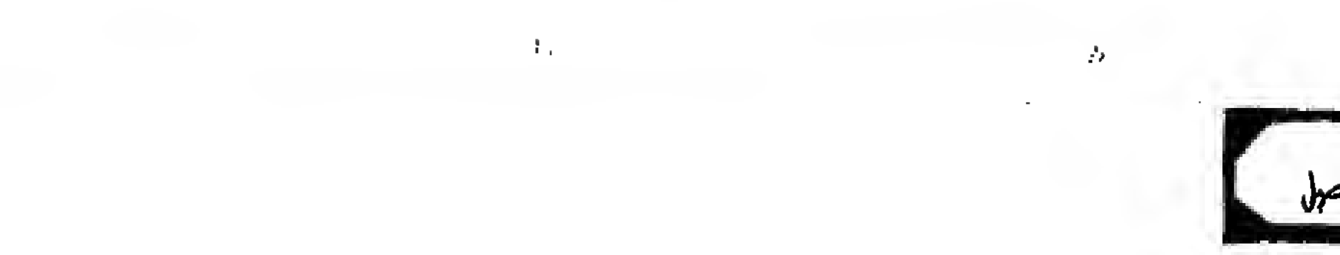
In June 1986 Amoco began litigation and in the middle of last month the International Chamber of Commerce in Paris awarded it $383m – the sum due the last time EGPC and Amoco held talks, in September 1986.

The arbitration of the chamber is supposed to be binding on the parties but it does not seem likely that EGPC will be able to pay within the 30 days stipulated. *If it fails*, it is assumed that Amoco will stop its gas deliveries to EGPC and pursue its claim through the courts. Amoco has twice before cut its deliveries, in May and October last year, and *resumed them* when it had misleading indications that it was likely to be paid.

It is recognised by everyone involved that ultimately the solution to the payments problem has to be political – litigation will do no more than increase the pressure in this direction. Ideally, Sharjah would offer to make some regular payments to the federal government, the offer *would be accepted* by the Government and by Abu Dhabi, which at present pays most of the federal budget, and then in turn payments for gas would move from the Ministry of Electricity to EGPC to Amoco and the Sharjah state government.

It is said that Sharjah has recently made an *offer* of budget payments though this cannot be confirmed. *Given the delicate* state of the Emirate's internal politics, the reluctance of the ruler to give way on the issue and pride of all the parties involved, *it* seems likely that a solution will not be arranged quickly.

Michael Field



Weakening oil prices have not yet hit the economy

Prosperity holds up

THE UNITED Arab Emirates at present is the most prosperous of the Gulf's oil states. It ran its oil production last year at 1.45m barrels a day – one and a half times its Organisation of Petroleum Exporting Countries' quota. Of the total, Abu Dhabi produced 1.07m b/d and Dubai 380,000 b/d.

Although Abu Dhabi has recently cut its production by 30 per cent, and both states may suffer from lower prices this year, the effects of the weakening oil market have not yet fed through to the economy as a whole.

Dubai, as well as buoyant oil production, has an expanding service business and a flourishing re-export trade. And both Abu Dhabi and Dubai benefit in the negative sense from having none of the special problems that have beset their neighbours.

The Kuwaiti economy has been paralysed for several years by the crash in 1982 of the Souk al Manakh, the unofficial stock exchange, and the collapse of its important re-export trade with Iran and Iraq. Bahrain has suffered from the decline of regional banking activity and an ebbing of confidence in its role as a regional service centre.

In the Northern Gulf, business confidence is much more affected by the Gulf war than it is in the UAE, partly because Kuwait, Bahrain and Saudi Arabia are closer to the scene of the fighting and partly because they have much less good relations with Iran than do the Emirates.

All of these environmental factors are significant but, in the end, they are less important as a source of prosperity than large oil revenues. The oil incomes of Abu Dhabi and Dubai last year are believed to have run at about $6bn and $2bn respectively.

Of these sums, a theoretical $3.5bn was paid to the Federal Government. Officially, the Federation is supposed to receive 50 per cent of the oil revenues of all UAE oil producers, but in practice it is only Abu Dhabi and Dubai that have paid any significant sums at all, and from what they pay they deduct their own spending on defence, security, health and education, which are nominally federalised but in the two leading states come under the local governments. Given that defence and security are generally reckoned to account for 40 per cent of oil revenues, the deductions made under these headings are large ones.

Furthermore, since the fall in the region's oil revenues became serious, in 1984, the Federal budgets, which run on the Gregorian year, have been announced late. In the last two years, spending agencies hava operated month by month on the basis of their being given a twelfth of their previous year's allocations, with these arrangements being formalised retroactively in a budget in the autumn. The same seems set to happen in 1988.

The result of this has been that Federal spending has fallen considerably since 1984. Ministries have not been able to run large deficits as they did up to and including 1985. What small deficits they have had have been made up at the end of the year by Abu Dhabi, which has led the Emirate to claim that it is spending over half of its oil revenues on the Federation and may have made it less tolerant of the recent failure of Sharjah to contribute to the budget.

Because it has not had any revenues of its own it has always been argued in the Emirates that the Federal Government cannot borrow. Last month, though, the Central Bank governor, Abdul-Malik al-Hamar, announced that

"There is not enough capital reaching the private sector"

his bank had sold $1.7bn of certificates of deposit to the commercial banks up to December 25 last year, and he added that, in future, if the state governments were unable to make up the Federal deficits, there would have to be issues of treasury bonds and bills. Income-tax as an additional source of revenue was ruled out after Saudi Arabia's mismanaged introduction and immediate cancellation of the tax in January.

While it remains short of revenues practically all of the Federal Government's money is going to current items. Neither the Federal nor the Abu Dhabi state governments have been able to make significant cuts in their spending on welfare and subsidies, which would be politically unpopular. But whereas Abu Dhabi and Dubai are able to be prompt in meeting their obligations on current expenditure (and on projects), the Federal government is often late in paying salaries, rents and other day-to-day bills.

Both Abu Dhabi and Dubai have been able to keep a fair number of projects under construction. In Abu Dhabi, much of the expenditure at present is on military installations – the Sadiyat island missile base, the naval facilities at Tawilah in the west of the emirate, the Sweihan garrison and an extremely luxurious officers' club. The eventual cost of these projects will be at least $2bn.

Major civilian projects are the Al Ain airport – UAE's sixth international airport, a widening of the Abu Dhabi-Al Ain motorway, major road improvements in Abu Dhabi city and the Tawilah desalination plant and power station.

In Dubai, the Bin Hud air defence base is virtually finished, as is one of the world's most opulent golf courses, an enormous stretch of grass with oriental pavilions, in the middle of the desert. Work is under way or starting on city roads, a motorway to Al Ain, a sewage and storm drainage system, an air cargo "village" at the airport and various parks.

For the short- and medium-term future, there are plans for a big expansion of the Al Ain university, which should be a Federal project but will probably be paid for by Abu Dhabi, more leisure, defence, sewage and electricity projects, and, possibly one of the most talked about projects in the UAE at present – the Umm al Qaiwain aluminium smelter.

The ruler of the emirate of Umm al Qaiwain and the project promoters are anxious that the smelter should go ahead – and in favour of the project is the fact that the price of aluminium recently has been strong. Against it are the lack of obvious sources of finance – Umm al Qaiwain has virtually no revenues of its own – and, more serious, the lack of guaranteed gas supplies.

Those projects that are being carried out at present are pumping enough money into the UAE private sector to keep the business climate in the country fairly prosperous. The difference between the present projects and those of five years ago is that implementation now is being stretched. One can see that construction is going on, but it is obviously slower than it might be and there is not enough capital reaching tha private sector to encourage businessmen to embark on new projects of their own.

The moderate prosperity that continues for the time being is more visible in Dubai than in Abu Dhabi – which is as it always has been. This is not because Dubai is the Gulf's only diversified or "real" economy, as expatriates sometimes refer to it.

Its flourishing re-export trade, based in the creek, much of it involving goods being shipped to Iran, turned over $1.4bn last year. And its modern port handles about $5bn of goods, which made up some 90 per cent of the UAE's imports.

The state's smelter has benefited from the rise in world aluminium prices and its huge dry dock has taken in a stream of war-damaged tankers – though by no means all of its business stems from the hostilities in the Gulf.

In some of these ways Dubai has been lucky in recent years. But it has deserved its luck because it is an extremely enterprising city state, whose merchants and ruling family are continually thinking of ways in which they might generate further revenue.

THe current emphasis is on making the state a regional service centre. It has already attracted the regional headquarters of Lloyds Bank and Citibank from Bahrain, though there is little prospect of it developing as a banking centre in its own right. Recently, Intercontinental hotels, Lufthansa and Brokenhill Proprietary have established regional offices in the state.

Where one sees Dubai's particular enterprise is in the ways it has thought of to keep the new arrivals in the state – and, if possible, attract some tourists. It has built its extraordinary golf course and horse and camel race tracks, sponsored a world chess olympiad, spent much on city beautification, and developed a very efficient airport with by far the world's cheapest duty-free shop – a place which makes one realise what huge profits duty-free shops elsewhere must be making.

What Dubai has realised is that the longer it can encourage individual expatriates to stay in the state, the more they will help it to innovate and prosper.

Michael Field

Diplomatic relations with the Soviet Union

Lure of trade, treatment and tourism

A YEMENI guard checks visitors to the Soviet embassy compound in central Abu Dhabi. Once inside the wall, only Soviet staff are visible. A security man casually scrutinises the visitor approaching the main entrance past newly-grown lawns where only scrub desert existed until recently.

The massive five-storey embassy building, home and office to eight accredited diplomats and over 30 support staff and dependents. It is the spearhead of the Soviet Union's energetic campaign to win hearts and minds in the UAE, regarded by many diplomats – not all of them western – as "the soft underbelly" of the Arabian peninsular.

Diplomatic relations were established in November 1985. The ambassador, Felix Nicolaevich Fedotov, presented his credentials to the UAE's president Shaikh Zaid the following October.

Like its embassy in Kuwait, which numbers some 180 including families, the Soviet representation in Abu Dhabi has grown to be far in excess of what is needed for the maintenance of normal diplomatic and commercial relations. UAE-Soviet relations are a conspicuously lop-sided affair. The UAE has just one diplomat – the *chargé d'affaires* – in Moscow. UAE diplomats for this posting are hard to find.

The UAE is the fifth country in the Arabian peninsular to establish diplomatic relations with the Soviet Union. The Russians have long had a presence in North and South Yemen, but until October 1985 when Oman established relations, Kuwait was the only member of the Gulf Cooperation Council to have a Soviet embassy.

"Attitudes of the UAE and Soviet Union over the Gulf war are very close"

Now, within the GCC, comprising Bahrain, Oman, Kuwait, Qatar, Saudi Arabia and the UAE, only in Bahrain, Qatar, and Saudi Arabia – the main Soviet target – are without official representation. But it is generally reckoned among nationals and foreigners alike in the Gulf that these three will follow, as high level visits and contacts multiply.

"We can wait," said Mr Fedotov in a recent interview. "Two, five, ten, twenty years, is nothing in relations between countries." And he added: "It is illogical to ask the Soviet Union as a member of the Security Council to help end the Gulf war without establishing diplomatic relations."

Mr Fedotov is an old diplomatic hand with some 25 years experience in the Arab world. He has been ambassador in Damascus, Khartoum and Aden as well as having done service in Baghdad and Cairo. Congenial and persnasive, he is fluent in English which he uses to good effect. He claims not to speak Arabic, bnt when pressed acknowledged that he was conversant enough to be able to correct an interpreter.

At the public relations level, his efforts are generally recognised to have been very effective. "Energetic, active, making up lost ground" are words and phrases Western diplomats and UAE nationals alike use to describe him.

Mr Fedotov himself says there has been a "big psychological change" since he arrived. "Most of the ignorance in the UAE about the Soviet Union has been dissipated. For example, it was not generally known that the Soviet Union shares a common border with Iran of more than 2000 kms. Relations with us are now accepted as a *fait accompli* where before there was little beyond curiosity."

On the level of pure rhetoric, Mr Fedotov has found fertile ground for Soviet views on the main issues affecting the Arab world. General UAE criticism of US support for the Israeli occupation of Arab territory, UAE concern over the presence of US and other naval ships in the Gulf, and support for UN resolution 598 to end the Gulf war are all general issues on which the Soviet Union and the UAE share similar views.

"The attitudes of the UAE and the Soviet Union over the Gulf war are very close," Mr Fedotov maintains. "We both want to see the fulfillment of UN resolution 598 as the only solid and sound basis for ending the war. This resolution will maybe become as important in its own context as resolution 242 has become on the Palestinian problem."

But Fedotov said the Soviet Union was being very careful "not to destroy the political base" of the resolution. "There is no military option or solution to the war." Iran was "very sensitive, very stubborn, very intelligent. If we come to force them what will be the result?" No one knew.

He acknowledged the UAE had been disappointed with the Security Council's recent inartia. "GCC countries," he said, "had every right to try and act as mediator between Iran and Iraq.

"Within the UAE private comment on the size and efforts of the Soviet Embassy is guarded. UAE nationals are too polite either to contradict a diplomat in his presence or to give the appearance of being negative about him, but it is clear that Soviet overtures have not been entirely successful. "He speaks well," said one Dubai businessman who has heard the ambassador more than once, "but you do not know what is in his heart."

Few in the UAE have responded to the Soviet insistence that there exists complete religious freedom in the Muslim territories of Soviet Central Asia. One of those who have however is Shaikh Mohamad al-Khazraji, the UAE minister for Islamic Affairs and Awqaf (religious endowments). Mr Khazraji is due to make a second visit soon to Baku in Soviet Azerbaijan to attend an Islamic conference hosted by Soviet Muslim religious leader.

The Soviet occupation of Afghanistan however is a harder nut to crack for the Soviets in their campaign to win friends. On the other hand, there are several UAE citizens and other Arab nationals based in the country who have taken advantage of the opportunities for visas since November 1985 to visit the Soviet Union either for medical treatmknt or tourism – or both in the same package.

Specialists from Moscow'a Optical Surgery Institute visited the UAE last year, offering treatment. The response was heavy according to the manager of the local travel agency which also acts on behalf of Aeroflot, the Soviet airline. After treatment patients are offered a tour to the Black Sea coastal resorts in Southern Russia. Charges for the medical package are said to be Dh14,000.

Some returning patients seem impressed. Many choose Moscow because Austria or West Germany – the preferred countries for medical treatment – are considered too expensive. London, except for those Gulf Arabs who know their way around, has built a reputation for fraudulent overcharging.

In the wake of the embassy's public relations campaign has come a growing number of trade, commercial and technical delegations from both the Soviet Union and other eastern bloc countries. Six of these – Bulgaria, Czechoslovakia, East Germany, Hungary, Poland and Romania – already have trade offices or diplomatic relations.

Most of the commercial exchanges are strong on rhetoric and short on substance. Some are motivated by a desire to find new trade outlets out of sheer frustration at what is deemed by at least one Dubai businessman to be the arrogance and difficult temperaments of British export managers.

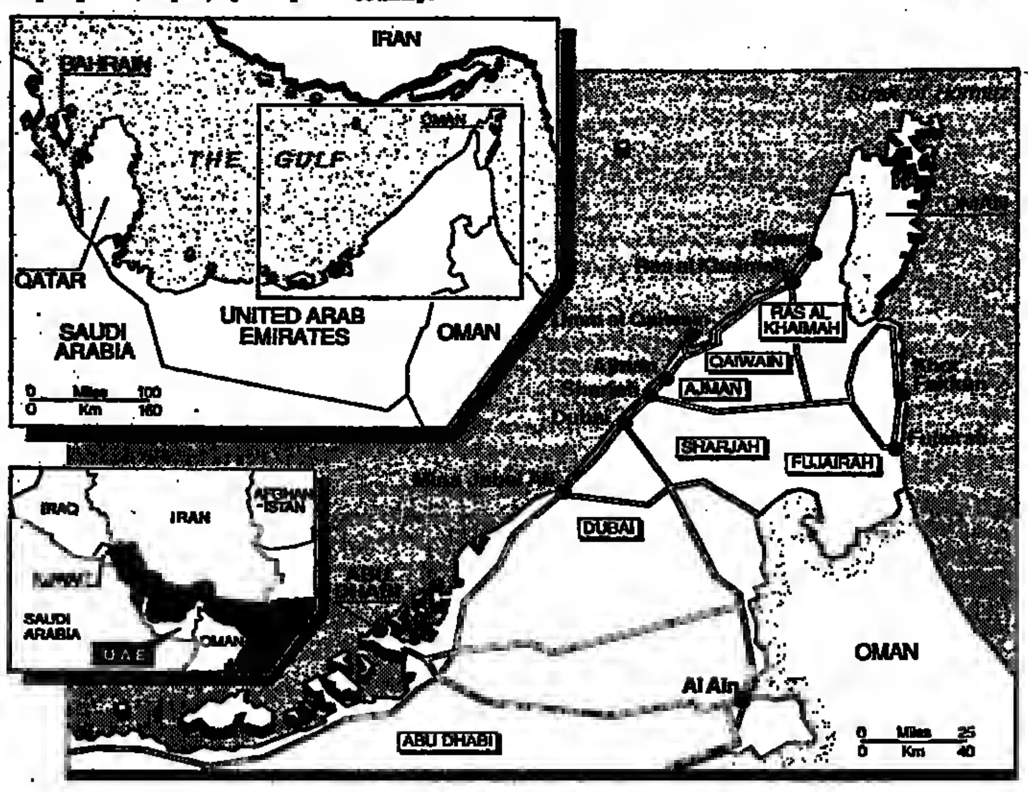
But trade so far is small. In 1985 and 1986, the last years for which complete figures are available, Soviet exports through Dubai amounted to just over Dh1m and Dh4m respectively. Top exporter, Japan, by comparison exported goods worth around Dh3,000m in each of the two years.

East German officials are mounting an active campaign to recruit UAE nationals to East German polytechnics and are reported to have paid Dh100,000 to a prominent Abu Dhabi businessman in sponsorship fees. Earlier this month, East German officials offered advice to UAE education authorities anxious to establish polytechnics in this country.

Last November the Soviet Chamber of Commerce's head of International Economic Organisations Mr Eldar Younousov, on a visit to Dubai, remarked there was "great potential" for a sharp increase in Soviet exports

Sevaral UAE businessmen are however aware trade provides the Soviets a convenient way to intensify the government's hearts and minds campaign.

Robin Allen



Banking

Interest by decree

AT LAST, it seems that the legality of compound interest in Abu Dhabi, which in the past two years has been a major anxiety of bankers in the state, has been acknowledged.

Even in its final stages, resolution of the issue has been fraught with contradictions. Last July, Commercial Banking Decree No 3 of 1987, signed by Sheikh Zayed, the ruler, stated that in the event of a dispute over a loan, the rate of interest agreed in the original contract would apply up to the time of a suit being filed. Thereafter the rate would be 9 per cent flat. This seemed clearly, but indirectly, to endorse the principle of compound interest, assuming that had been part of the original contract.

Two months later, in September, was published Commercial Banking Decree No 4, which by chance was signed by the Crown Prince, Sheikh Khalifa bin Zayed. This stated that in no case should interest exceed 50 per cent of principal, which seemed likely to cause enormous complications with overdrafts, which are a very popular form of business finance in all the Arabian Peninsula oil states.

Who exactly was behind this second decree, and what his or their motives were, is not clear. But in the classic Arabian way, which seeks compromise and tries to avoid over-ruling any person's decision, it has come to be accepted that the first law applies up to the date of judgment of a case and the second between judgment and settlement, in which time interest charges are extremely unlikely to grow to anywhere near 50 per cent of the sum outstanding.

At the same time instructions have been given that banking cases should go to the civil rather than the Shariah (Islamic) courts. These instructions are essential to the working of the new rules, because Shariah law, which condemns interest as usury, is based on the Quran, the word of God as recorded by the prophet Mohammed, and it cannot be altered by Commercial Banking Decrees.

For all the banks in Abu Dhabi the new dispensation is a relief. Since the recession began in 1984, litigation has been difficult for them. In isolated cases, the Shariah courts, which have extremely informal procedures, had refused utterly to acknowledge the legality of even simple interest, in spite of a Federal Supreme Court decision in 1981 that it was reasonable for banks to charge up to 9 per cent to personal clients and 12 per cent to corporate clients. And in almost every case the courts bad declared compound interest to be illegal.

This used to discourage banks from taking defaulting borrowers to court, because some companies, which bad longstanding overdrafts, would have been able to claim compound interest going back many years. In a few cases, it led to clients actually suing their banks for repayment of interest. The most serious instance of this involved a contractor, Cicon, suing Grindlays and Paribas for compound interest dating from 1968 and 1974.

There are some thousands of banking cases pending in Abu Dhabi which should now start to be resolved, either through their being brought before the courts or through borrowers deciding that it would be expedient to settle. Several of the Abu Dhabi banks have large sums of outstanding interest, against which they have already made provisions but which they now have a good chance of being able to collect.

All of the banks are still being very cautious in their lending, especially to members of the ruling family, whom it is difficult for them to sue.

The one problem that most of the Abu Dhabi (and Dubai) banks do not have is large exposure to Latin American debt – unlike some of the Bahraini-registered banks. The exception, ironically, is the National Bank of Abu Dhabi, which traditionally has been by far the biggest and strongest of the locally-owned banks.

NBAD has not yet released its 1987 results, but it is thought that they will show that its operations at home have done well while it has had to make major provisions to cover loans to Latin America and the losses of its subsidiary in Washington.

In Dubai, there has been no equivalent of the compound interest issue. The courts in the state have always acknowledged the legality of interest and when they become involved in banking disputes they concentrate on trying to reconcile the parties. Dubai's major banking problems were resolved several years ago when the Union Bank of the Middle East and the Dubai Bank were merged and some of the other local banks recapitalised.

Since then, the banks in the state have been trying to recover or reschedule their difficult loans. Most of the borrowers that have had problems have been small companies. The bigger of the two major firms that have rescheduled debts have been Galadari Brothers, which has reorganised payment of $158m owed to two separate consortia and now has to renegotiate some $100m owed to its former subsidiary, the Dubai Bank. The other firm is the Al Shirawi Group, which is still negotiating the rescheduling of a debt of under $100m.

It is felt in Dubai that some of the banks have not made realistic provisions to cover their doubtful loans. There are a few institutions which have large assets but modest profits, which suggests that they have loans still in their balance sheets which are not performing. After a year or so in which several banks have not been paying dividends, it is suggested that it may be premature for these institutions to restart dividend payments now.

These are fairly minor criticisms. The UAE Central Bank, which at the beginning of the 1980s had little authority, now conducts detailed audits of the banks' positions, and if it is satisfied with a bank, then it is said that its provisions must be at least moderately realistic.

The only place in the UAE where there are potentially frightening skeletons in banks' cupboards is Sharjah, where the two locally incorporated banks are thought to be owed around $1bn by the state government. This, though, is a political problem and it will be resolved if and when Sharjah sorts out its financial relations with the federal government.

What the banking pictures in all the emirates have in common is a recent switch to personal lending. Since there is little project finance to be arranged the change is mainly something that has been forced on the banks, but personal lending and consumer finance do have the advantages of spreading risks and commanding high interest rates.

The main disadvantage is that a borrower may leave the country without repaying his debt, though this possibility can be countered by a bank taking guarantees from his friends. And in a country with a population of a little over a million the size of the market is limited.

Even so, competition between the banks has been sufficient for interest rates on personal loans to have fallen from 18 per cent to as little as 12 per cent for favoured clients – this being equivalent to a poor corporate rate.

The customer, though, has to be careful to avoid what a managing director recently described as "little gains". These involve what seems a reasonable rate of interest being made much more expensive by its being charged at a flat rate on the borrowed amount during every year of the loan, or the whole interest amount being charged as soon as the loan agreement is signed.

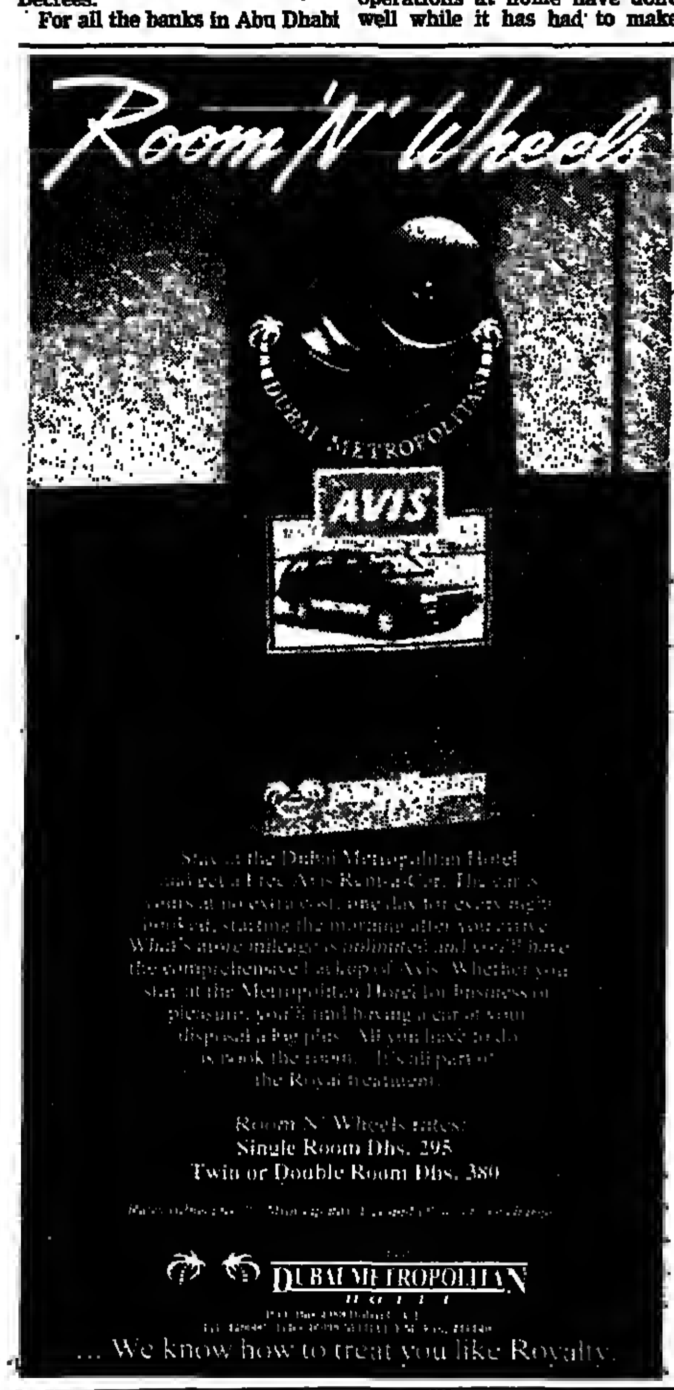
Figures in the above table are inexact because of rounding

Michael Field

Selected UAE local banks 1985-1987
(Dh millions)

	Total assets			Loans/Advances			Customer Deposits			Shareholders Equity			Provisions			Net Profits		
	1985	1986	1987	1985	1986	1987	1985	1986	1987	1985	1986	1987	1985	1986	1987	1985	1986	1987
Abu Dhabi Commercial Bank	5,365	7,236	n.a.	3,834	4,054	n.a.	3,460	3,410	n.a.	1,258	1,190	n.a.	–	18	n.a.	(177)	(68)	n.a.
B. of Credit & Commerce (Emirates)	4,193	4,562	n.a.	2,032	2,655	n.a.	3,050	3,565	n.a.	307	323	n.a.	11	23	n.a.	65	63	n.a.
Bank of Oman	6,785	6,609	n.a.	3,258	3,409	n.a.	4,435	4,859	n.a.	559	564	n.a.	45	60	n.a.	40	55	n.a.
Commercial Bank of Dubai	1,163	1,104	1,192	567	574	635	605	800	650	261	265	289	4	6	6	20	16	16
Middle East Bank	2,791	2,791	n.a.	1,818	1,797	n.a.	2,052	2,008	n.a.	161	261	n.a.	80	19	n.a.	(93)	14	n.a.
National Bank of Abu Dhabi	20,737	19,521	n.a.	10,448	8,164	n.a.	14,324	12,960	n.a.	1,853	1,860	n.a.	206	164	n.a.	13	59	n.a.
National Bank of Dubai	18,844	20,198	21,021	1,236	1,292	1,510	15,975	16,803	17,874	2,346	2,404	2,760	35	28	20	905	820	712
National Bank of Ras Al Khaimah	604	599	602	237	227	205	412	340	360	115	117	121	7	11	6	6	7	13
National Bank of Sharjah	2,336	2,336	n.a.	1,585	1,754	n.a.	1,187	1,441	n.a.	337	357	n.a.	24	33	n.a.	29	20	n.a.
Union Bank of the Middle East	5,660	4,989	n.a.	2,139	2,359	n.a.	3,474	3,528	n.a.	500	523	n.a.	n.a.	40	n.a.	n.a.	23	n.a.

Source: Bank Reports. n.a. = Not Available



Tourism

Colourful, exuberant places

THE AUTHORITIES in Abu Dhabi and Dubai may not believe it, but I love the UAE. In surveys like this, one has to write about personalities or other sensitive topics, such as the events in Sharjah last summer, which in Arabian society are never mentioned publicly. The reason is that these subjects are important, and it would be wrong to apply one set of reporting criteria to the industrialised countries and another softer set to the Middle East.

The articles are in no sense meant as criticism - I find both people and the politics of the UAE fascinating, albeit different from Europe.

But it is not just the society that makes me miss no opportunity to go to the Emirates. Abu Dhabi and Dubai are colourful and, by Middle Eastern standards, exuberant places, by far the most physically attractive of the Gulf States.

Dubai has its creek: tall, modern buildings on one side, mostly traditional/Persian structures on the other, the shores lined three or four deep in places with Arab and Indian dhows. The sparkling blue water in between is criss-crossed by Abras, little passenger launches crammed with Indian and Pakistanis in white pyjamas (immigrants from the sub continent make up about 70 per cent of Dubai's population). The scene is busy, oriental, and highly commercial.

To walk along the banks of the creek is to watch the commerce of the Indian Ocean. The wharfs are piled with sacks of Thai rice, gunny bags of onions labelled as Danish on one side and Pakistani on the other (but actually from Iran), huge cartons containing unit air conditioners or refrigerators, Japanese cars, fish traps in their squashed, folded form, sacks of clothes, coffee and cardomom seeds - things which have a good old fashioned look when one sees them in bulk.

Abu Dhabi is quite different. It is the state in the Arabian peninsula that in 20 years has changed itself from a small group of Barasti (palm fronds) huts to something that looks very like Miami Beach. There are plenty of skyscrapers in reflecting glass – blue and gold are the favourite colours. A Bahreini friend of mine describes the style of architecture as "Abu Dhabi galore."

Along the five kilometres of glittering corniche (labelled "Cornish Road" on some signposts) and other major streets are lawns, flowerbeds, fountains, palm trees, oleander and bougainvillea – all of them kept alive by water desalinated from the sea.

Abu Dhabi is a country which has decided to spend its money and enjoy it. It is quite unlike Kuwait, whose canny population works on what a diplomat described recently as the principle that "If one cannot make money from something it probably isn't worth doing."

In both Abu Dhabi and Dubai, the atmosphere is relaxed. The ruling families have a tradition of being welcoming to foreigners. Alcohol is served in the hotels, women can drive, and men and women can bathe together on the beaches – all of which is illegal in Saudi Arabia.

In most of the other Arabian oil states, foreigners feel oppressed. In the UAE, where they form a good 80 per cent of the population, they seem to feel welcome. If one walks along the Abu Dhabi corniche on a Thursday evening one sees hundreds of little family groups of Indians, Pakistanis, Egyptians, Palestinians, as well as Abu Dhabi nationals, just sitting and enjoying the grass, or eating picnics. In other states, the immigrant has nowhere similar to go, and the atmosphere is such that they would probably feel happier to relax with their families at home.

Outside the two main cities, the towns of the UAE are less attractive but there are magnificent stretches of coast and desert. The Eastern coast of the country, made up of the Emirates of Fujirah and part of Sharjah, has palm fringed beaches backed by a range of blue mountains. It is only spoilt by the vast amounts of litter - polythene bags and pepsi cola cans that have been left on the beaches.

In the south of Abu Dhabi, on the border of Saudi Arabia, is the beginning of the Empty Quarter. In this desert, the biggest uninhabited stretch of land on earth, not a drop of rain may fall for a generation. As one drives towards the Liwa oasis the last place of habitation before six hundred miles of towering sand dunes, the road gradually becomes submerged in drifting sand. When the sky is grey and the wind whips up dust into the air one has the strong, and rather frightening feeling that one is entering a place that is totally hostile to man.

To go into this desert one needs a guide, a four-wheel drive vehicle and a big supply of water. One tells the police where one is intending to go, and for how long. Once one gets there, one experiences utter stillness, totally clean air and at night a panorama of the Milky Way.

The UAE is the only Gulf State that has potential as a tourist centre and it is the only state that is trying to attract tourists. Dubai particularly is having some success, though the people who are coming so far are fairly unenterprising, low spending package tourists who spend most of the time on the hotel beaches, which admittedly, are attractive and have excellent sporting facilities.

Dubai has recently invested in several parks, one of the world's most magnificent golf courses and horse and camel race tracks. In 1986, it sponsored the World Chess Olympiad which attracted most of the Grand Masters including Messrs. Karpov and Kasparov. A year later Sharjah sponsored the Cricket World Cup.

The Emirates' tourist appeal is enhanced by an almost total lack of crime and good weather – in the months of March, April, October and November the climate is perfect, though the summer is extremely hot and, in the three winter months, the weather can be overcast, cloudy and wet.

The hotels are superb. In Abu Dhabi the best are the magnificent Intercontinental and the much more friendly and informal Sheraton Hotel and Resort. In Dubai there are the Intercontinental, the Hilton and, some miles south of town, the luxurious Jebel Ali resort hotels.

Michael Field

Projects in the pipeline

ABU DHABI

1) Ghantot Club resort hotel: at Ghantot, on the sea 100 kms from Abu Dhabi near the Dubai border, Abu Dhabi National Hotels Company is planning a multi million dollar chalet hotel resort on an island close to the shore. The hotel will comprise ten 3-bedroom and ten 2-bedroom chalets. Visitors would leave their cars on the mainland and shuttle to the island by ferry. The resort will include an 18 hole grass golf course on the mainland. Other facilities: tennis, squash, horse riding, swimming pools, horse and camel race tracks, fitness centres, water skiing and fishing. Completion planned for 2 years from July 1987, but likely to take longer.

2) Khalidiya tourist and residential centre: in Abu Dhabi city, proposal is to use part of the existing Khalidiya Palace hotel as the site for a new 16 storey hotel plus a holiday centre of some 120 suites and chalets. Yachting marina, swimming pools and a bowling alley to be added. Client is the private department of Shaikh Mohamed bin Khaled al Nahyan. Consultant is Helal and Partners in Abu Dhabi. Estimated cost Dh100m plus.

3) Leisure project at Al Ain Al Faydha: designed for middle income groups this project will comprise chalets, artificial lake and go-kart track. The project is being developed by Al Ain municipality and Town Planning department. Manager will be Abu Dhabi National Hotels Company. Proposal includes development based on annual go-kart competition. Five countries took part last year bringing in some 30,000 visitors. Clients propose to double the attendance and triple the number of participants. Estimated cost Dh50m - Dh 60m.

4) Al Ain/Jebel Hafit resort motel: 50-bedroom motel on the summit of the 1,000ft jebel overlooking Al Ain. Plans include the construction of a cable car up the mountain. Chalets and playgrounds to be constructed. Cost unknown. Client is ADNHC.

5) Private Club for Officers: the main – Dh200m – contract to construct the main building has already been awarded (to Dubai based Al Habtoor Engineering Enterprises). But this is estimated to be less than one half of total expenditure planned. The design includes the construction of VIP villas and accommodation for senior officers, a yachting marina, landscaped gardens and general sporting facilities.

6) Al Jazira + Al Wahda sports clubs: soccer stadiums and related facilities are to be built at both sites. Some Dh100m is to be spent on the two. Client in both cases is the Abu Dhabi Public Works Department. Consultant, also for both, is Riyad Tayer and Associates.

7) Corniche Development: Client is Abu Dhabi Municipality on behalf of the ruler Shaikh Zayed. Construction is complete of the one mile long breakwater and dhow restaurant affording spectacular views. Development plans include marina, park and playground.

DUBAI

8) Hotel and marina near Emirates golf club: to add to the first all-grass 18 hole championship golf course in the Arabian peninsular (formally opened by Pakistan's president Zia al Huq on March 8) the Dubai government is planning a design competition among pre-qualified consultants for a yachting marina and second resort hotel on the coast opposite the golf club near Jebel Ali. To include all general sporting facilities. Estimated cost Dh200-300m.

9) Sports Stadium: to comprise an all-grass cricket stadium and indoor hockey stadium lined with astro turf. Facilities will include a covered grandstand for the cricket stadium, plus related indoor facilities including gymnasia. Client is Dubai municipality. Consultants are Al Wasl Al Jadid Consulting in association with the UK's Mott, Hay and Anderson. Estimated cost Dh50m.

10) Dubai Creek Recreation Park: to be located between the Maktoum and Garhoud bridges, a scrub desert site of some 100 hectares is to be transformed into a park area and recreation zones for cycling and ball games alongside the creek and boating/fishing on the creek itself. the Municipality wants to resuscitate activity in and along the creek now that industry has moved out. Architect: UK's Rice Perry Ellis. Estimated cost Dh80m over a 2-year period from December 1987.

"Emirates"

Airline success

PROFITS, PASSENGERS and controversy have all flocked to Dubai since the emirate started its own airline - known by the single word - Emirates - in October 1985.

"Emirates" success on the London route in particular sparked a barrage of loose allegations from rivals about Emirates' price cutting. In the ensuing heat, it was forgotten that Emirates does not – and did not need to – resort to undercutting to win passengers. It is the only airline offering daily non-stop, daytime flights to and from London. Its main rivals, British Airways and British Caledonian (still operating separately on this route) either leave in the middle of the night or stop en route.

In the event, the new airline has grabbed 49 per cent of the traffic compared with 32 per cent for British Airways and British Caledonian combined.

The controversy – or that part of it which is rational – is a measure of Emirates' commercial success and its rivals' instinctive fear that Emirates is a more formidable competitor than was at first thought possible.

Dubai is an unusual phenomenon as far as air traffic is concerned. The Emirate, the second richest and arguably the most independent-minded of the UAE's seven emirates, (it can afford to be) has a population of some 500,000 out of the country's total of 1.6m. But despite its small population, it boasts the second busiest airport in the world in term of transit passengers after Tokyo's Narita airport. in 1986, it received 1.55m transit passengers compared with Tokyo's 1.89m.

Part of the reason for this lies in the UAE's multiple definition of a "transit" passenger. This is not only someone moving through the airport from one flight to another. Many transit passengers come in on 7-day renewable visas issued by the sponsoring company. More and more international companies are using Dubai as their regional service base, and the number of temporary business visitors has increased out of all proportion to foreign residents.

At the same time, Dubai and the northern emirates in the words of Emirates' managing director, Mr Maurice Flanagan, "has possibly the highest ratio of passengers to total population of any country in the world." Over 80 per cent of the UAE is made up of expatriates. But UAE nationals also travel regularly to Europe, US and Asia. Even among Asian labourers there is a steady influx and outflow.

Airline traffic on all routes among the 51 airlines using Dubai – excluding Emirates – was 18 per cent up last January compared with January 1987. Emirates itself has seen its passenger traffic rise by 66 per cent in this same period, and cargo traffic by 75 per cent.

Emirates owns and operates two Airbus A310-300 extended range aircraft and one Boeing 727. It leases one Airbus A300-B4 from PIA. It will shortly take delivery of two more aircraft – one Boeing 727 which it will own outright and one Airbus A300-600R, the financing of which is still being negotiated.

Emirates' routes now extend to London, Frankfurt and Istanbul in Europe, Cairo and Amman in the Middle East, and Karachi, Bombay, Delhi and Dacca in Asia. It is negotiating traffic rights in Singapore and will shortly start talks for similar rights in Manila.

It used to be thought that Emirates would need regional landing rights, in Riyadh, Dhahran, Bahrain and Kuwait, to become economically viable. But according to Flanagan, "we now have as much growth as we can comfortably handle. We are not dependent on landing rights in neighbouring GCC countries." However, talks are going on with Saudia about landing rights in Riyadh.

Emirates was the brain child of Dubai's ruling family, in other words, the government. But once launched, the airline had to sink or swim on its own in competition with Gulf Air, owned by the governments of Abu Dhabi, (on behalf of the UAE), Bahrain, Oman and Qatar.

The creation of Emirates means that the UAE is now in the extraordinary position of having two national airlines. But Emirates can control its market in a way a consortium cannot – providing that Dubai remains an attractive transit point and regional business centre.

Robin Allen

Basic Facts

Official title: United Arab Emirates
Head of State: President HH Sheikh Zayed bin Sultan al Nahyan (ruler of Abu Dhabi)
Head of government: Vice-president HH Sheikh Rashid bin Said al Maktoum (ruler of Dubai)
Capital: Abu Dhabi
Official language/s: Arabic (English often used in business)
Currency: Dirham (Dh) = 100 fils
Area: 90,559 sq km (including offshore islands)
Population: 1.62m (1987)
GDP per capita: $13,385 (1986)
GDP real growth: −18.2 per cent (1986)
Labour force: 550,000* (1986)
Inflation: 2 per cent* (1986)
Oil reserves: 32bn* barrels (1987)
* estimated figure

Drugs smuggling

Unstashing hash

DUBAI'S REPUTATION as the commercial centre of West Asia is now well established, but success has its price. In the last few years it has become, according to the head of the Dubai CID, Colonel Abdul Aziz Mohamed Abdullah, the principal staging post on the drug route from Asia to Western Europe.

Ninety-nine per cent of the drugs smuggled into Dubai are re-exported. Hashish and opium come from India and the Golden Crescent – Iran, Pakistan and Afghanistan. Heroin comes overland from Lebanon's Bekaa Valley.

The transit trade through Dubai has taken on a new and sinister note in the last 18 months. Quantities hava dropped, but the "quality" has risen. Traffic in heroin rose fourfold last year to some 40 kgs. The number of travellers being used, wittingly or not, as couriers, has also risen.

In 1986 Dubai's anti-narcotics division seized 2,800 kgs of all types of drugs. The figure dropped to just over 1000 kgs last year but shows signs of increasing again. Ona recent haul – from under the floorboards of a container lorry eearched at Dubai's commercial port – revealed 1041kgs of hashish stashed under a 10,000 kg consignment of Basmati rice from Pakistan.

The largest concentration of hashish so far discovered was 2562 kgs, also in a container lorry, bound from Pakistan to Belgium and Holland.

Heroin is smuggled by road in hollowed-out fruit or vegetables or in cassette tapes from Lebanon, despite lorries having passed through up to six customs posts on their journey to the UAE. By contrast most opium and hashish comes by sea in containers loaded with anything from furniture to hollowed-out shaving brushes (also a favoured hiding place for heroin) and inside tubes of toothpaste.

Several arrests have been made, after both men and women, given heroin implants, arrive through Dubai's international airport. CID has plain clothes officers mingling with passengers in the arrivals terminal.

One kilo of heroin with a value equivalent to 15 or 20 kgs of hashish, will fetch $4,000-$5,000 in Pakistan. On the open market in the West, it will sell up to $300,000 per kilo – "a greater return on investment than the oil business," remarked Colonel Abdul Aziz with more than a hint of irony.

For the first time ever a Federal Ministry has published figures on the numbers of drugs-related arrests in the UAE. In 1981 a total of 255 people of all nationalities were arrested. By 1987 this had risen to 481. For a population of around 1.6m these figures are alarming enough.

"But picking up individual carriers barely touches the problem," the Colonel remarked. "You have to hit the manufacturers. But you won't stop drug trafficking without a much better public service information programme."

Robin Allen